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Updates

DATE	PAGE	DESCRIPTION
08/02/18	B17 & E12 A08 & A11	Added ACW20228 & ACW20229 as Espag Handle block options Added W20171 28mm Glazing Bead
26/04/18	B15 & E12	Updated Handle block information for ACW20100 & ACW20101

Specification

GENERAL DESCRIPTION

RECOMMENDED DESIGN LIMITATIONS

Windows

Top Hung Vents:

Maximum Width: 1400 mm

Minimum Width: 400 mm

Maximum Height: 1400 mm

Minimum Height: 400 mm

Maximum Weight: 50 kg

Side Hung Vents:

Maximum Width: 700 mm

Minimum Width: 400 mm

Maximum Height: 1400 mm

Minimum Height: 400 mm

Maximum Weight: 30 kg

PROFILE SPECIFICATION

The window frames are constructed of aluminium alloy extrusion to BS EN 755-9 and BS EN 12020, extruded from 6063 T6 alloy. The internal and external extrusions are separated with a polyamide thermal break.

The external aluminium alloy extrusion is pre-treated and finished either:-

Anodised to BS 3987: 1987, grade AA25 to a natural self colour.

- a) Anodised to BS 3987 : 1987, grade AA25 to a natural colour.
- b) Polyester powder organic coating to BS 6496. Dual colour is available.

Specification

Kitemark™ Certificate

No. KM 81580

Size Limitations and Performance Characteristics

Alitherm 500 Aluminium Alloy Window System

Window Type	Width (mm) Maximum	Height (mm) Maximum	Weight (kg) Maximum	Area (M ²) Maximum	Hinges	Transom/Mullion Length (mm) inc frame - Maximum	Air Permeability classification	Water tightness classification	Resistance to Wind classification	Exposure category as given in Table 1 of BS 6375-1:2009
Sash dimensions for windows with approved sash profiles:										
Top hung Internally beaded	1400	1400	50	-	ACET552	-	2	E900	AE2400	2000+
Side hung Internally beaded	700	1400	30	-	ACET552	-	4	E1050	AE2400	2000+
Dummy Sash Internally Beaded	1400	1400	-	-	-	1400	4	E1050	AE2400	2000+

*Transom/mullion subject to lxx/lyy requirements

- See hardware for minimum sizes
- Use four hinges for top hung over 1200mm wide
- ACET550 Hinges are not covered by the Kitemark. Please contact our technical department for further information.

Alitherm 500 Operational Performance (BS6375-2:2009)

Alitherm 500 has passed the operational & strength requirements of of BS6375-2

Alitherm 500 Window Security (PAS24)

Top hung & side hung sashes have been successfully tested to PAS24:2016.

All testing was completed with ACET552 hinges only. ACET550 hinges have not yet been tested. Please contact our Technical Department (T:01934 876100) for further information.

Alitherm 500 Window U Values

Please refer to the Smart Systems' Document L White Paper or contact the Technical Department.

For advise on window sizes outside of the recommended design limitations, please contact the Technical Department at Smart Systems Ltd Tel: 01934 876100

Specification

GENERAL MANUFACTURING

Outer and vent frames are made by cutting the frame profiles with accurate 45° mitred ends using Tungsten Carbide Tipped Saw Blades, operating at approximately 3000 rpm.

The corners are joined using the Alitherm 500 crimping tools to form a cold forged corner joint (made by deforming small slugs of metal into the groove of the corner cleat).

The ends of transoms and mullions are profiled to fit the frame and fixed using self-tapping screws with a small joint sealant.

On polyester powder coated finishes, great care should be taken to avoid getting gap sealer on visible surfaces and should be removed as soon as possible with a clean cloth.

Care should be exercised when using products not supplied by Smart Systems Ltd as no responsibility can be accepted.

WINDOW DRAINAGE

As with all dry glazed systems, it is recommended that the window system is adequately drained and ventilated. Refer to drainage details in manual, if in doubt ask The Technical Department.

In order to get maximum performance and weather resistance it is recommended that drips are used over all vents.

OUTER FRAME MANUFACTURING INFORMATION

The outer frame members are cut with 45° mitred ends to the overall size required, measured to the longest point of the metal.

Prior to corner crimping the centre line position of any transoms or mullions should be marked on the outer frame members. Where the transom/mullion runs right through, it should be marked out on both jambs or head and cill members in pairs to ensure accurate alignment of the sections.

Using the marked centre line, Drill the transom/mullion fixing holes using a 5mm dia. drill bit.

Corners are formed by coating the cut faces to be joined with a suitable small gap sealer. Into the mitred corner insert the cleat glue and the required corner cleats and, where required, the aluminium corner chevrons. The two mitred ends are then brought together and crimped. The small gap sealer ensures a permanent joint and guards against the ingress of moisture and joint movement. After crimping the corner joint, special care should be taken to ensure any excess sealer is removed from painted surfaces.

Transoms or mullions are cut with square ends to the sizes calculated on the cutting formula sheets. The ends are then profiled to allow them to fit into the outer frame. Special tooling is available on request to profile the end of transom/mullion.

Prior to fixing of transoms and mullions smear the cut ends with a suitable small gap sealer. After fixing, special care should be taken to ensure any excess is cleared from painted surfaces.

Specification

VENT

Corners are formed by coating the cut faces to be joined with a suitable gap sealer. In the mitred corner insert the cleat glue and the required corner cleats and chevrons. The mitred ends are then brought together and crimped. The small gap sealer ensures a permanent joint and guards against the ingress of moisture and joint movement. Care should be taken to ensure any excess sealer is removed from the surfaces.

When fixing, the hinges, the fixing plates must be inserted into the outer frame and sash prior to assembly.

INTERNALLY BEADED ADAPTOR FRAME

The internally beaded adaptor frame members are cut with 45° mitred ends to the overall size required, measured to the longest point of metal. Care should be taken when measuring and cutting the frame members as only nominal clearance is required when the assembled frame is fixed in the outer frame.

Corners are formed by coating the cut faces to be joined with a suitable small gap sealer. Into the mitred corner insert the cleat glue and a corner cleat and the required corner chevrons. The small gap sealer ensures a permanent joint and guards against the ingress of moisture and joint movements. Care should be taken to ensure any excess sealer is removed from painted surfaces.

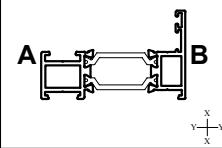
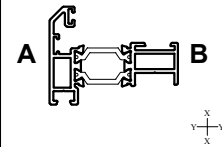
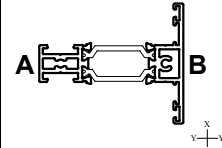
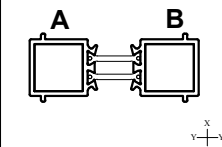
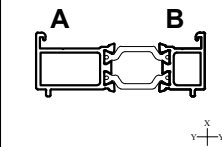

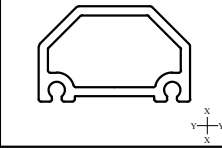
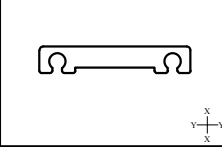
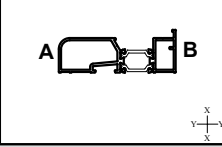
GLAZING

All beads are cut to suit the glazing aperture on the fully assembled window for glazing either at factory or on site as required.

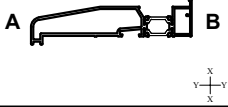
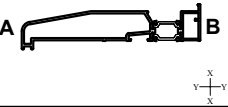
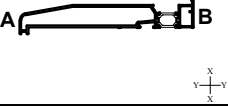
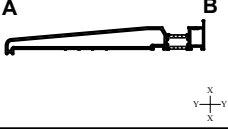
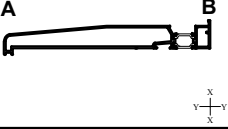
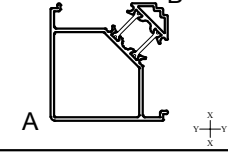
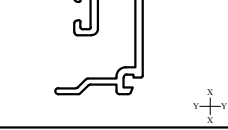
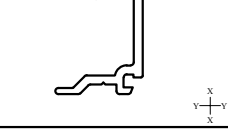
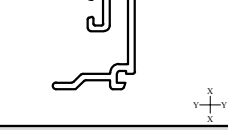
INTERNALLY BEADED GLAZING

Glazing beads are fitted to openings by cutting the horizontal beads square to head and cill of each vent and fixed light area. Vertical beads are cut square at both ends. Insert bottom beads and two setting blocks to ensure glass will be centralized in vertical dimension of opening (glazing blocks must be full width of cavity to fully support glass or sealed unit), then insert top bead followed by side beads. Finish glazing by insertion of internal gaskets all round.

PROFILES : TECHNICAL INFORMATION

Number	Picture	Page	Perim. mm	Mec. mm	lx(cm4) wx(cm3)	ly(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M	
ETC511		A09	274	61	15.15 — 4.62	2.13 — 1.66	6.5	1	✓	✓	✓	✓	✓	
ETC521		A09	319	66	10.9 — 3.4	2.85 — 1.57	6.5	1	✓	✓	✓	✓	✓	
ETC531		A10	306	74	16.68 — 4.59	2.89 — 1.17	6.5	1	✓	✓	✓	✓	✓	
ETC553		A15	201.6	53.7	12.06 — 4.05	1.67 — 1.39	6.5	1	✓	✓	✓	✓	✓	
ETC557		A15	197.4	54.6	17.47 — 4.31	1.50 — 1.45	6.5	1	✓	✓	✓	✓	✓	
ETC572		A10	82	39	- — -	- — -	6.5	1	✓	✓	✓	✓		
ETC580		A10	70.4	52	- — -	- — -	4	1	✓	✓	✓	✓		
ETC584		A10	65.3	27	- — -	- — -	4	1	✓	✓	✓	✓		
ETC451		A12	304	109	32.44 ----- 7.29	3.46 ----- 2.79	6.5	1	✓	✓	✓	✓	✓	
									GOZ = Gold W = White Z = Black		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

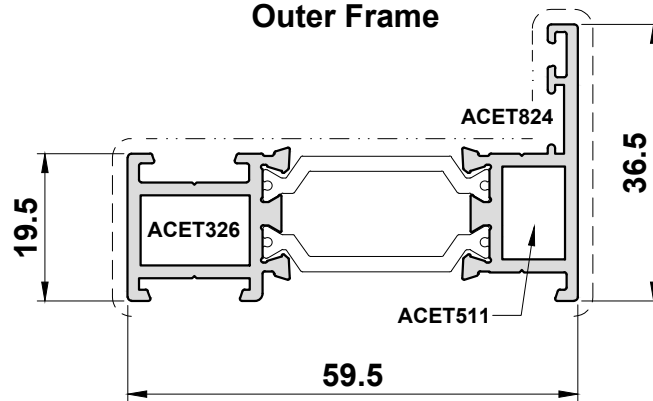
PROFILES : TECHNICAL INFORMATION

Number	Picture	Page	Perim. mm	Mec. mm	Ix(cm4) wx(cm3)	Iy(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M	
ETC452		A12	414	197	122.46 ----- 18.03	6.01 ----- 3.34	6.5	1	✓	✓	✓	✓	✓	
ETC457		A12	444	212	163.27 ----- 21.60	6.79 ----- 3.73	6.5	1	✓	✓	✓	✓	✓	
ETC458		A13	524	252	313.62 ----- 32.63	8.87 ----- 4.79	6.5	1	✓	✓	✓	✓	✓	
ETC477		A14	782	404	1591.6 ----- 105.33	26.84 ----- 12.84	5	1	✓	✓	✓	✓	✓	
ETC479		A13	594	287	501.64 ----- 44.04	9.72 ----- 5.34	6.5	1	✓	✓	✓	✓	✓	
ETC655		A15	570	340	18.16 ----- 5.97	10.65 ----- 5.01	6.5	1	✓	✓	✓	✓	✓	
W20168		A11	110	26	- ----- -	- ----- -	5	1	✓	✓	✓	✓		
W20170		A11	83	25	- ----- -	- ----- -	5	1	✓	✓	✓	✓		
W20171		A11	105	34	- ----- -	- ----- -	4	1	✓	✓	✓	✓		
								A = Outside B = Inside		GOZ = Gold W = White Z = Black		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour		

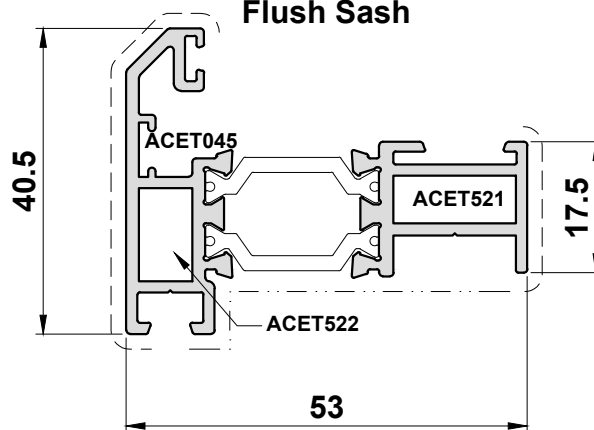
Primary Visible Side

Secondary Visible Side

ETC511 Outer Frame



ETC521 Flush Sash

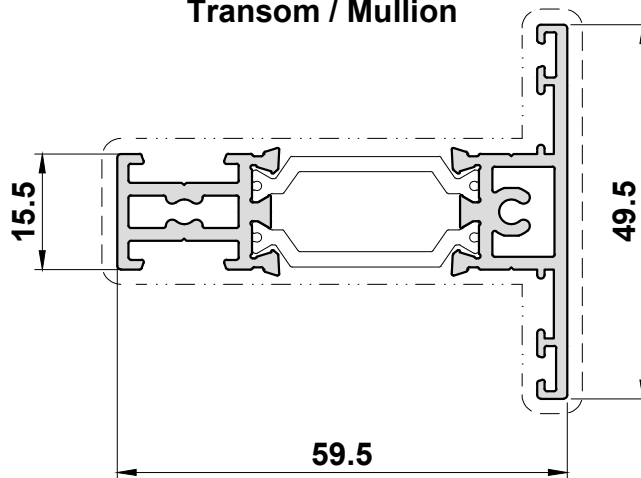


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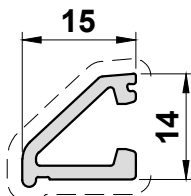
Primary Visible Side

Secondary Visible Side

ETC531
Transom / Mullion

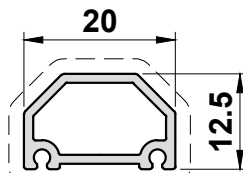


ETC572
Weather Drip



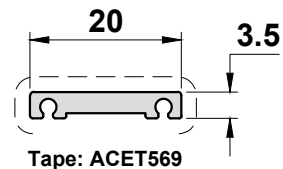
End Caps: ACET572
Rivets: ACVL061

ETC580
Astragal Bar



Tape: ACET569

ETC584
Astragal Bar



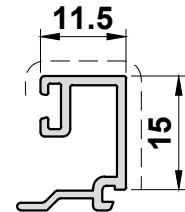
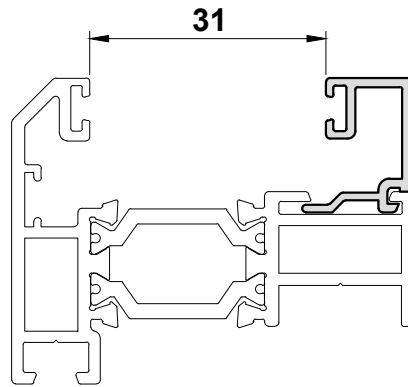
Tape: ACET569

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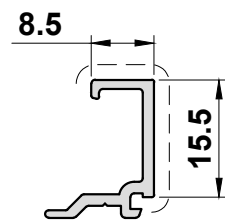
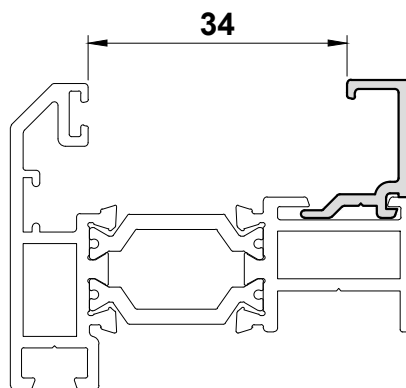
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Secondary Visible Side

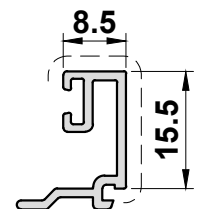
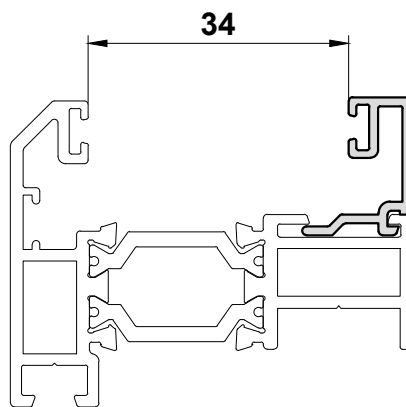
W20168
24mm Glazing Bead



W20170
28mm Glazing Bead



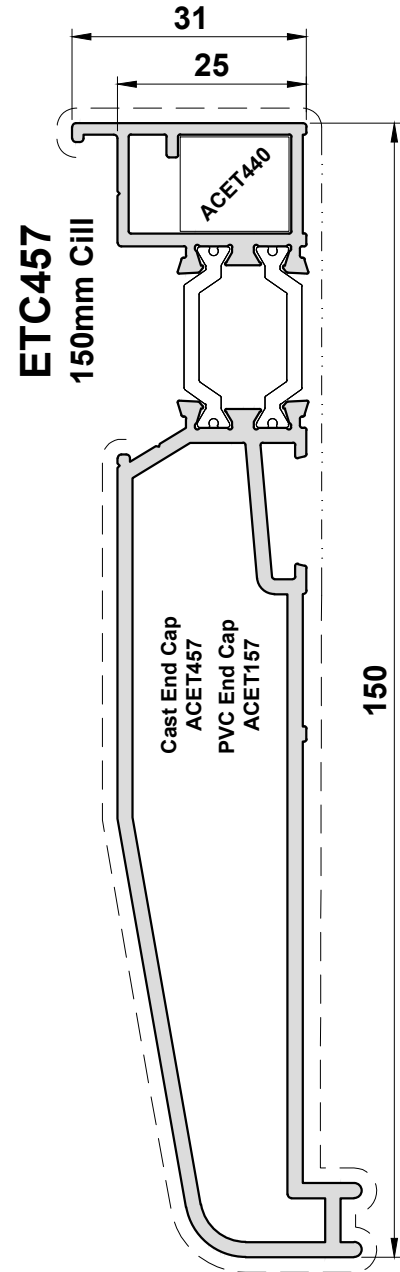
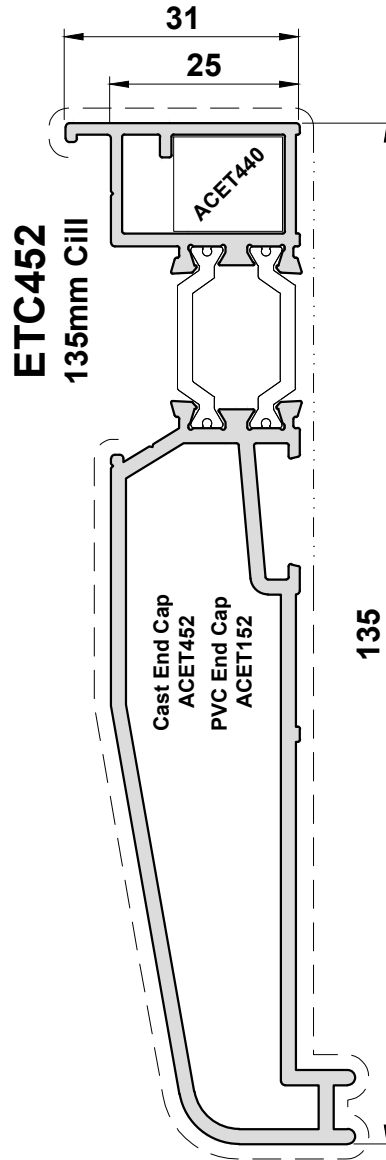
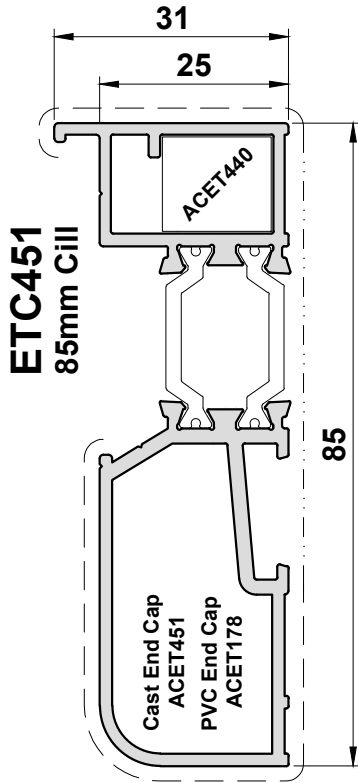
W20171
28mm Glazing Bead



Scale 1:1

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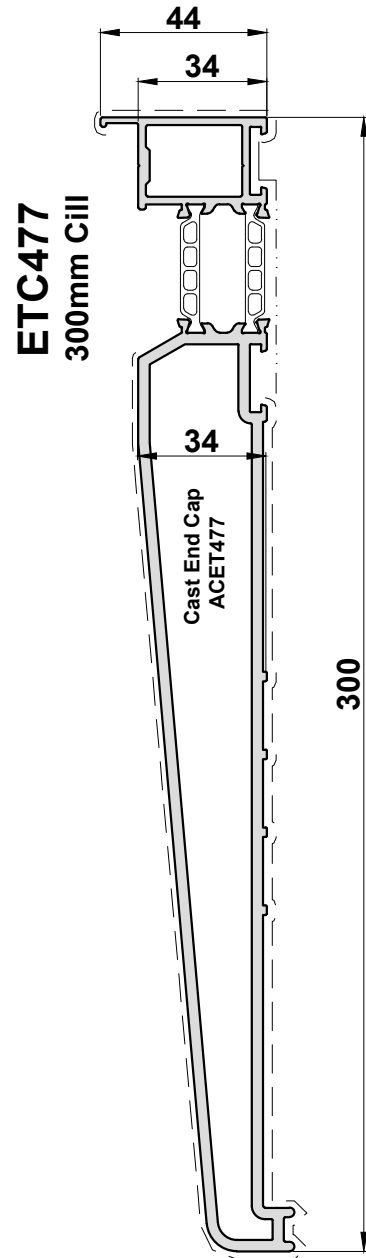
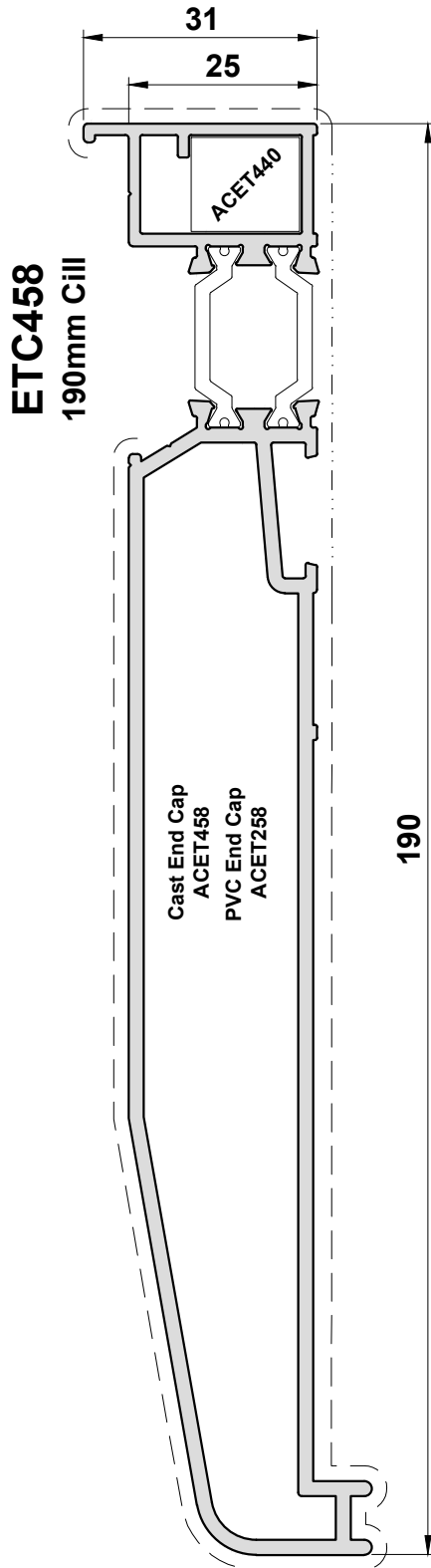
Secondary Visible Side



Scale 1:1

Primary Visible Side

Secondary Visible Side

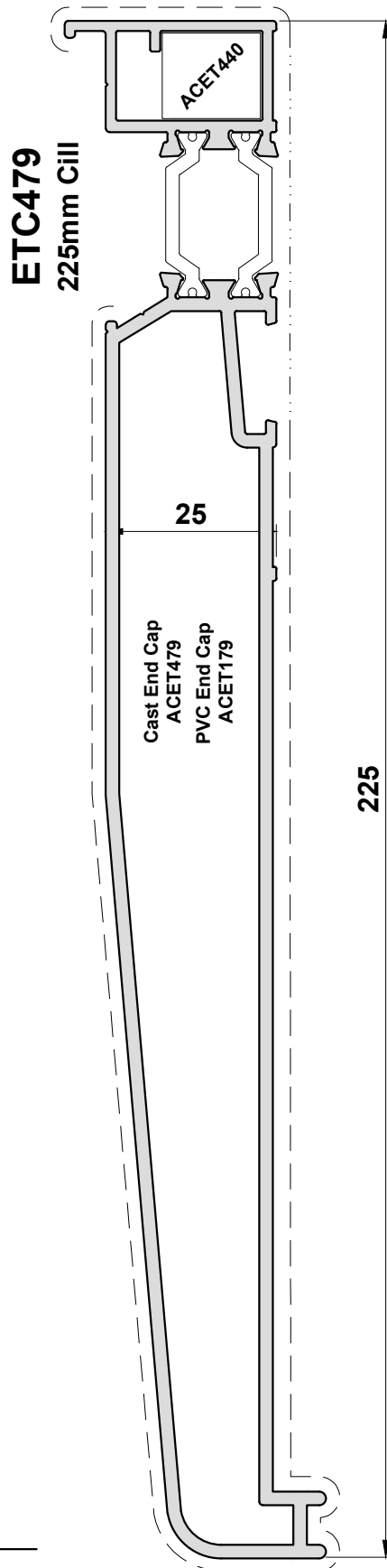


Scale 1:1

Scale 1:2

Primary Visible Side

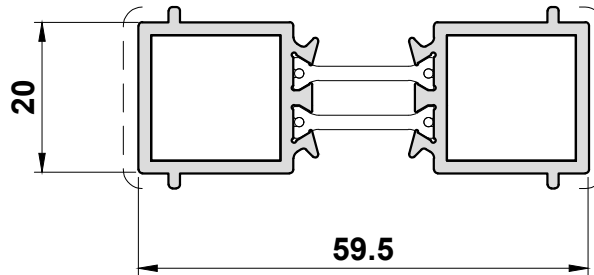
Secondary Visible Side



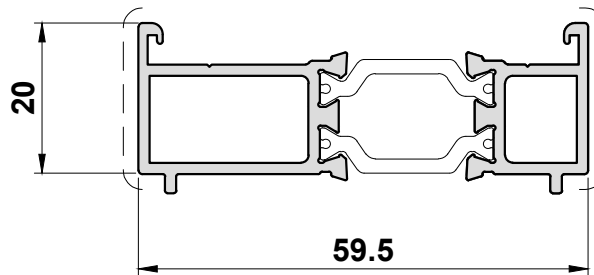
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Primary Visible Side

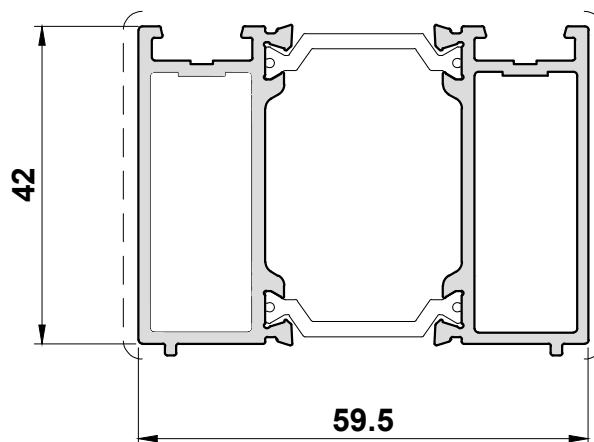
ETC553
20mm Frame Coupler



ETC557
20mm Frame Extension

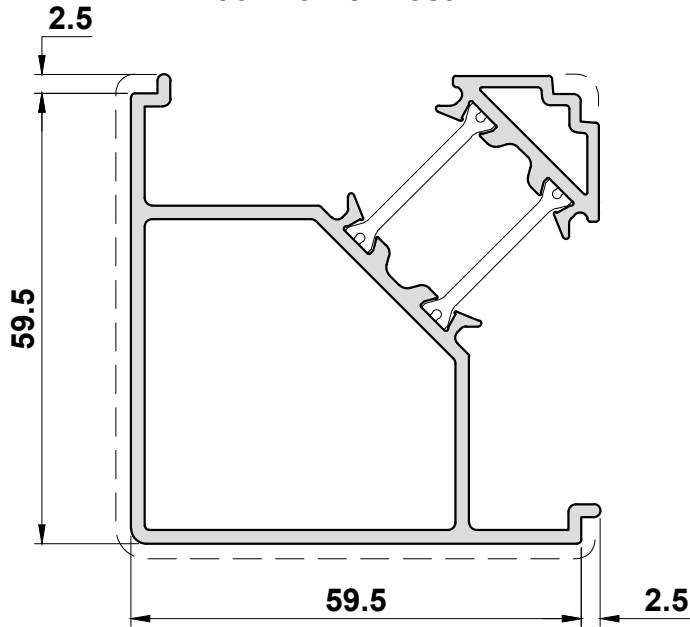


ETC652
42mm Frame Coupler



Primary Visible Side

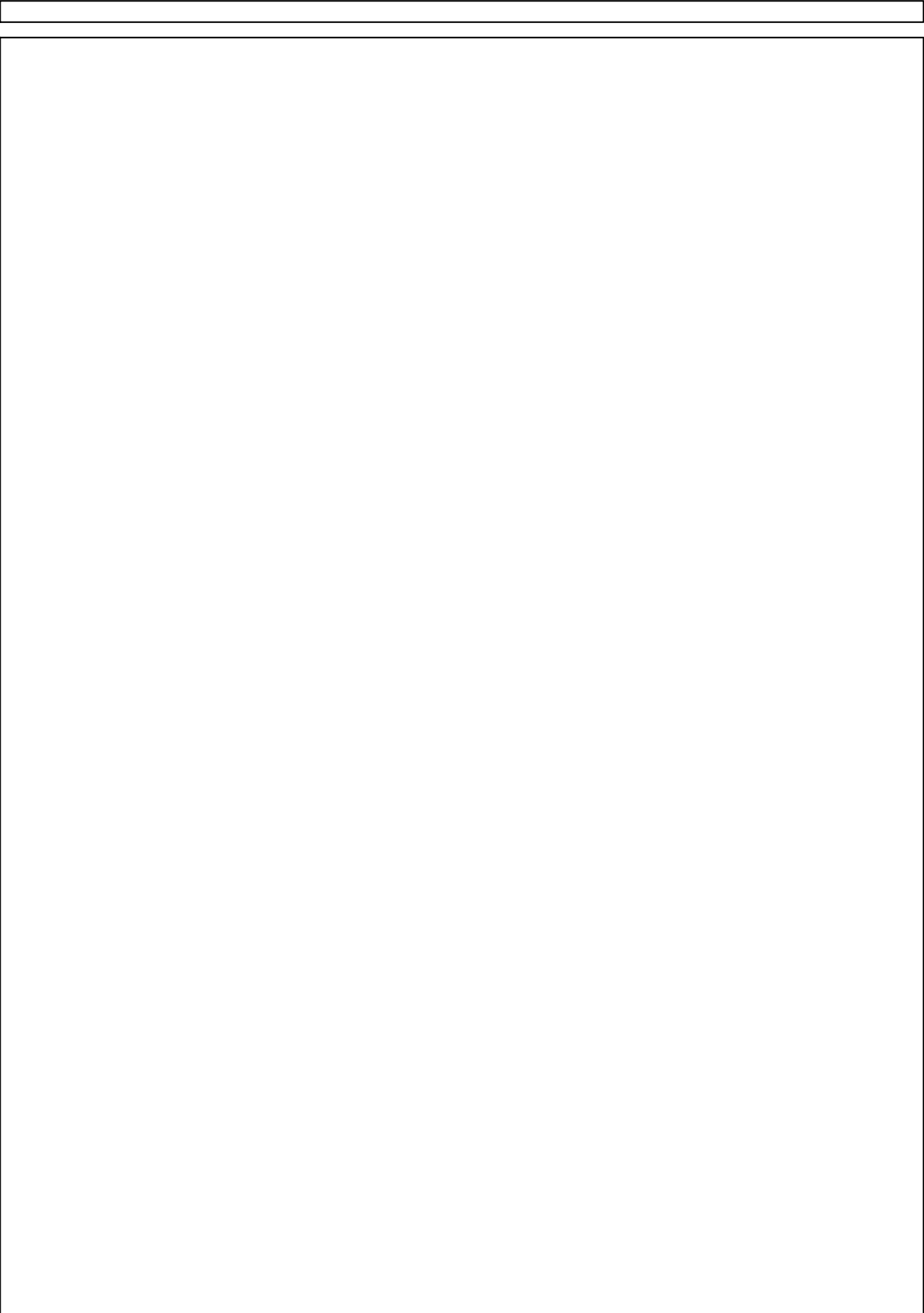
ETC655
90° Corner Post



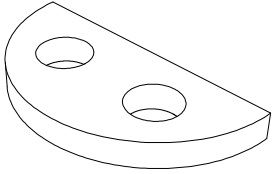
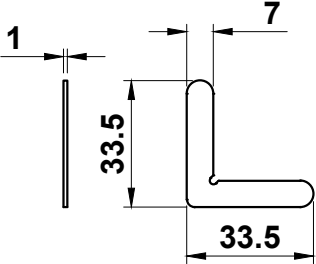
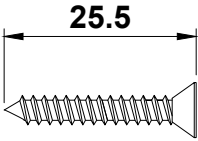
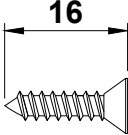
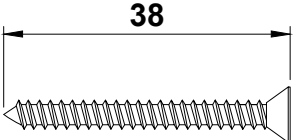


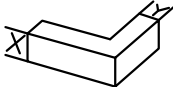
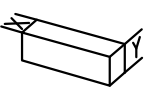
Section B

Accessories

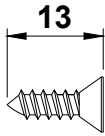

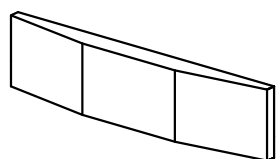
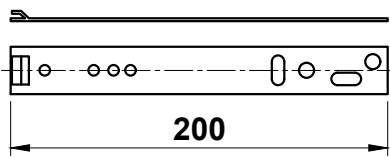
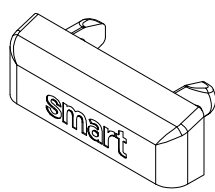


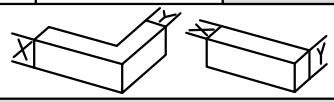
Photos & Drawings



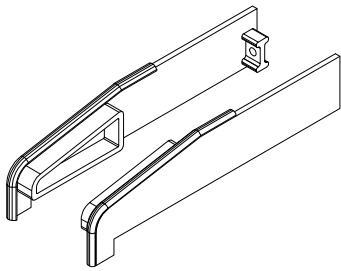
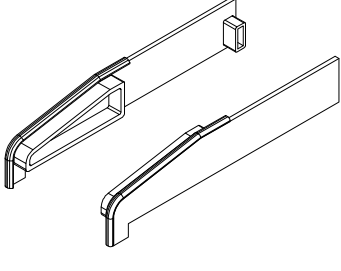

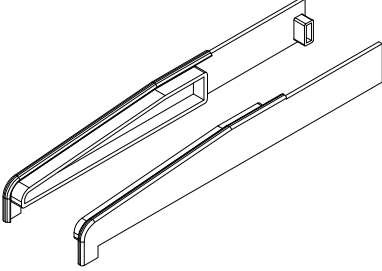
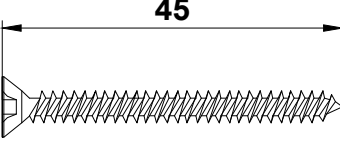


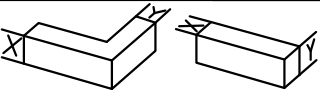
ACCESSORIES : PHOTOS & DRAWINGS

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					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
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W <input type="checkbox"/>					
Z <input type="checkbox"/>					
	ACET045 S/S Chevron	100	pack	ETC5250	MF <input type="checkbox"/>
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					PC <input type="checkbox"/>
W <input type="checkbox"/>					
Z <input type="checkbox"/>					
	ACET060 No. 7 x 25 S/S Self Tapping CSK Screw	100	pack		MF <input type="checkbox"/>
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					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
W <input type="checkbox"/>					
Z <input type="checkbox"/>					
	ACET064 No. 8 x 16 S/S Self Tapping CSK Screw	100	pack		MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
W <input type="checkbox"/>					
Z <input type="checkbox"/>					
	ACET066 No. 7 x 38 S/S Self Tapping CSK Screw	100	pack		MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
W <input type="checkbox"/>					
Z <input type="checkbox"/>					
 T-BARS ACV665=2.5mm ACV666=3.0mm ACVL150=4.0mm	 Screw (Grub)	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black	 	

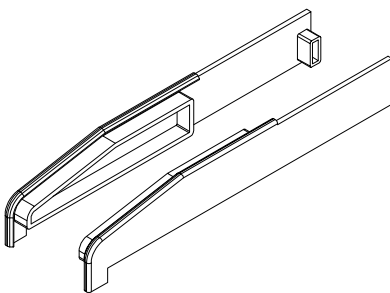
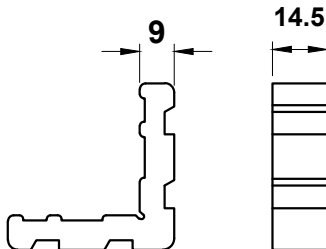
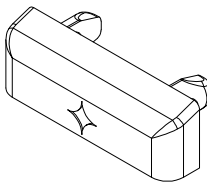
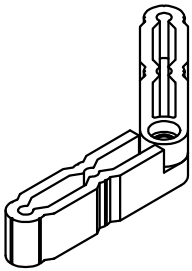
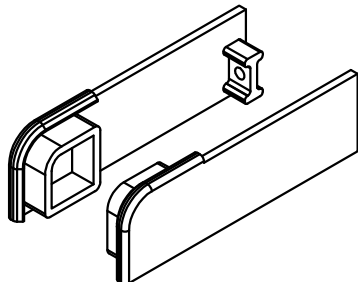
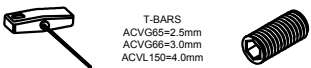
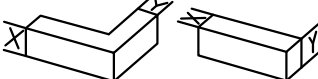
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour																		
	ACET067 No. 7 x 13 S/S Self Tapping CSK Screw	100	pack		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET080 Cockspur Handle	1	each	ACET083	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td>✓</td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td>✓</td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA	✓	KL		HP		BSC		SMC		PC		W	✓	Z	✓
MF																							
SA	✓																						
KL																							
HP																							
BSC																							
SMC																							
PC																							
W	✓																						
Z	✓																						
	ACET083 3mm Wedge	100	pack	ACET080	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td>✓</td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W	✓	Z	✓
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SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W	✓																						
Z	✓																						
	ACET130 Galvanised Steel Fixing Strap 200mm x 25mm x 1.5mm	100	pack	ETC511	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET131 PVC Drainage Cap	100	pack		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td>✓</td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W	✓	Z	✓
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W	✓																						
Z	✓																						
 	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black																					

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACET152 PVC Cill End Caps	10	pair	ETC452	MF	✓
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
	ACET157 PVC Cill End Caps	10	pair	ETC457	MF	✓
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
	ACET165 Offset Locking Espag Handle	1	each	Shootbolt Locking	MF	✓
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
	ACET179 PVC End Cap	10	pair	ETC479	MF	✓
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
	ACET190 Polyamide Screw	1000	pack		MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
 T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm	 Screw (Grub)	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour																		
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MF	✓																						
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET326 Crimping Cleat	24	pack	ETC511	<table border="1"> <tr><td>MF</td><td>✓</td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF	✓	SA		KL		HP		BSC		SMC		PC		W		Z	
MF	✓																						
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET431 Colour Match Drainage Cover Cap	8	pack		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td>✓</td></tr> <tr><td>HP</td><td>✓</td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td>✓</td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA		KL	✓	HP	✓	BSC		SMC		PC		W	✓	Z	✓
MF																							
SA																							
KL	✓																						
HP	✓																						
BSC																							
SMC																							
PC																							
W	✓																						
Z	✓																						
	ACET440 Variable Cill Angle Bracket	10	Each	ETC451 ETC452 ETC457 ETC458 ETC477 ETC479	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET451 Cast End Caps (Pair)	10	pack	ETC451	<table border="1"> <tr><td>MF</td><td>✓</td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td>✓</td></tr> <tr><td>HP</td><td>✓</td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td>✓</td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF	✓	SA		KL	✓	HP	✓	BSC		SMC		PC		W	✓	Z	✓
MF	✓																						
SA																							
KL	✓																						
HP	✓																						
BSC																							
SMC																							
PC																							
W	✓																						
Z	✓																						
 <p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	<p>MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome</p>	<p>W = White Z = Black</p>																					

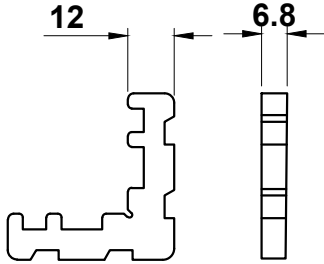
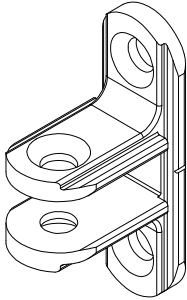
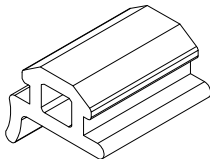
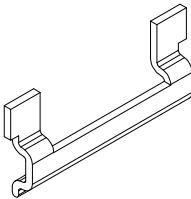
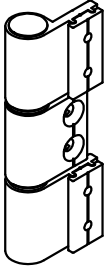

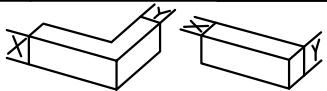
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
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					KL	✓
					HP	✓
					BSC	
					SMC	
					PC	
					W	✓
					Z	✓
	ACET457 Cast End Caps (Pair)	10	pack	ETC457	MF	✓
					SA	
					KL	✓
					HP	✓
					BSC	
					SMC	
					PC	
					W	✓
					Z	✓
	ACET458 Cast End Caps (Pair)	10	pack	ETC458	MF	✓
					SA	
					KL	✓
					HP	✓
					BSC	
					SMC	
					PC	
					W	✓
					Z	✓
	ACET460 Inline Espag Handle with 9mm Spindle	1	Each	ACET501 ACET502 ACET503 ACET504 ACET505	MF	
					SA	
					KL	✓
					HP	✓
					BSC	✓
					SMC	✓
					PC	✓
					W	✓
					Z	✓
	ACET465 L/R Cranked Espag Handle with 9mm Spindle	1	Each	ACET501 ACET502 ACET503 ACET504 ACET505	MF	
					SA	
					KL	✓
					HP	✓
					BSC	✓
					SMC	✓
					PC	✓
					W	✓
					Z	✓
<p>T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black				

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
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					HP <input checked="" type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
					W <input checked="" type="checkbox"/>
					Z <input checked="" type="checkbox"/>
SA <input type="checkbox"/>					
KL <input checked="" type="checkbox"/>					
HP <input checked="" type="checkbox"/>					
BSC <input type="checkbox"/>					
SMC <input type="checkbox"/>					
PC <input type="checkbox"/>					
W <input checked="" type="checkbox"/>					
Z <input checked="" type="checkbox"/>					
	ACET490 4.3 x 16mm CSK Polyamide Screw	1000	pack		
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
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					Z <input type="checkbox"/>
SA <input type="checkbox"/>					
KL <input type="checkbox"/>					
HP <input type="checkbox"/>					
BSC <input type="checkbox"/>					
SMC <input type="checkbox"/>					
PC <input type="checkbox"/>					
W <input type="checkbox"/>					
Z <input type="checkbox"/>					
	ACET521 Crimping Cleat	24	pack	ETC521	
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					<p>T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>

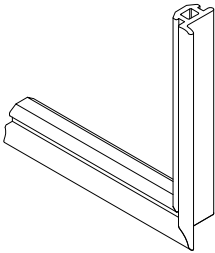
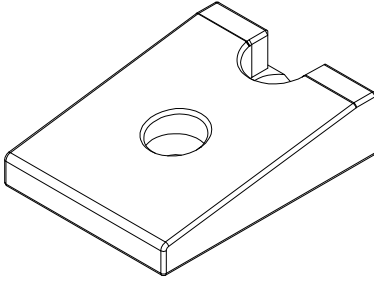
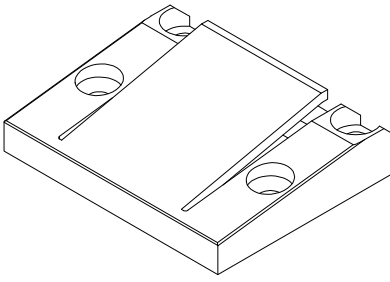
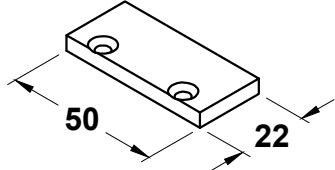
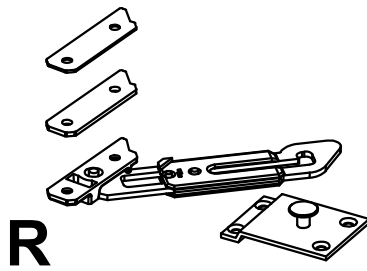

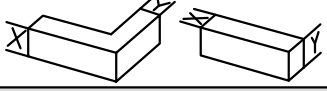
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour																		
	ACET522 Crimping Cleat	24	pack	ETC521	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET531 Transom Fixing Bracket	24	pack	ETC531	<table border="1"> <tr><td>MF</td><td>✓</td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF	✓	SA		KL		HP		BSC		SMC		PC		W		Z	
MF	✓																						
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET532 External Weather Seal	100	m		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	✓
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z	✓																						
	ACET533 Anti-Twist Clip For ETC531	100	pack	ETC531	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET550 Flush Window Hinge <u>Note:</u> Not currently covered by Kitemark	1	each		<table border="1"> <tr><td>MF</td><td>✓</td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td>✓</td></tr> <tr><td>HP</td><td>✓</td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td>✓</td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF	✓	SA		KL	✓	HP	✓	BSC		SMC		PC		W	✓	Z	✓
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SA																							
KL	✓																						
HP	✓																						
BSC																							
SMC																							
PC																							
W	✓																						
Z	✓																						
 <p>T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black																					

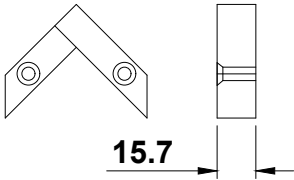
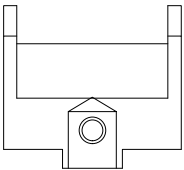
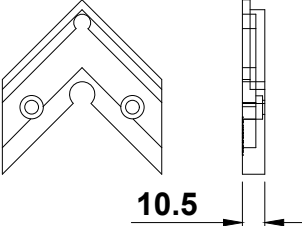
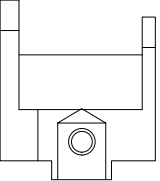
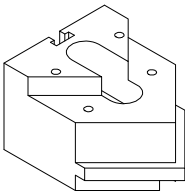

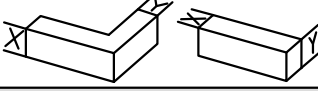
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
	ACET552 L/R Stainless Steel Flush Window Hinge	1	each		MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
	ACET553 Hinge Protection Bolt	1	each		MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
	ACET555 1250mm Foam Insert	1	each	ETC511 ETC530	MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
	ACET556 1250mm Foam Insert	1	each	ETC521	MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
	ACET569 10 x 1 Astragal Bar Tape	50	m	ETC580 ETC584	MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
	ACET575 Corner Moulding to suit ACET532	40	pack	ETC521 ACET532	MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z	✓				
	ACET580 Run Up Block	100	pack		MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z	✓				
	ACET582 Dummy Sash Clip	100	pack		MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
	ACET583 Dummy Sash Fixing Plate Required for PAS24:2016	8	pack		MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
	ACET585 L/R Hold Open Key Releasable Restrictor Arm	1	each		MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
Z					
 <p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			

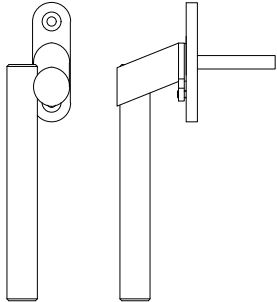
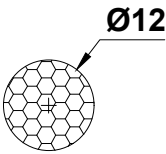
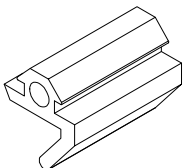
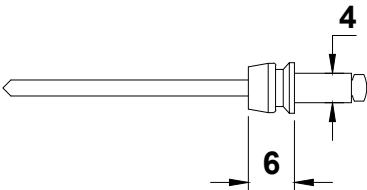
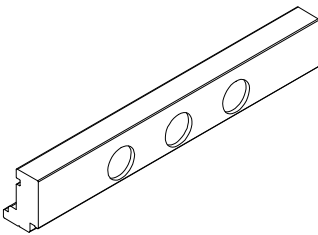


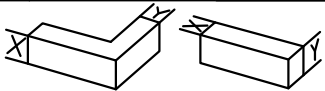
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
	ACET595 15.5mm Vee Block Packer	1	each	ETC511	MF <input checked="" type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					Z <input type="checkbox"/>
	ACET596 Punches	1	pair	ETC511	MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					Z <input type="checkbox"/>
	ACET597N 10.5mm Vee Block Packer	1	each	ETC511	MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					Z <input type="checkbox"/>
	ACET598 Punches	1	pair	ETC521	MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					Z <input type="checkbox"/>
	ACET594 Vee Block	1	each	ETC511 ETC521	MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					BSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					PC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					Z <input type="checkbox"/>
 <p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			

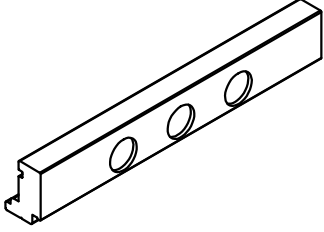
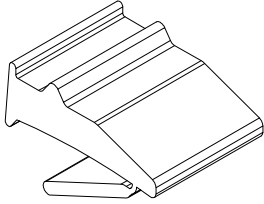





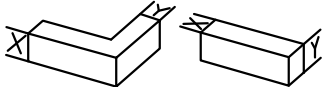
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour																		
	ACET824 S/S Chevron	100	pack	ETC511	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z																							
	ACET842 3mm Low Line External Gasket	200	m		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	✓
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z	✓																						
	ACET843 2mm Low Line External Gasket	200	m		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	✓
MF																							
SA																							
KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z	✓																						
	ACGSL045 Drainage Cover Cap	100	pack	ETC521	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td>✓</td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	✓
MF																							
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KL																							
HP																							
BSC																							
SMC																							
PC																							
W																							
Z	✓																						
	ACIM062 NO.10 x 1 1/4 S/S S/T CSK Screw	100	pack	ETC583	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>BSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>PC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> </table>	MF		SA		KL		HP		BSC		SMC		PC		W		Z	
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<p>T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black																					







ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
 <p>L</p>	ACSM010 L/R Stainless Steel Espag Handle	1	each	ACET501 ACET502 ACET503 ACET504 ACET505	MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
PC						
W						
Z						
 <p>Ø12</p>	ACVG561 Foam Insert (To go between glazing & sash)	100	m	ETC521	MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
PC						
W						
Z						
	ACVL032 Gasket	200	m		MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
PC						
W						
Z	✓					
 <p>4 6</p>	ACVL061 Rivet For VL72	100	pack		MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
PC						
W						
Z						
	ACW20028 Handle Fixing Block	1	each		MF	
					SA	
					KL	✓
					HP	✓
					BSC	
					SMC	
PC						
W	✓					
Z	✓					
 <p>T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p>  <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black				

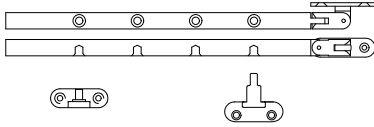

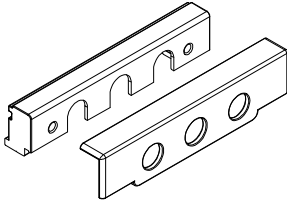
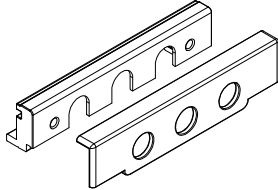

ACCESSORIES : PHOTOS & DRAWINGS

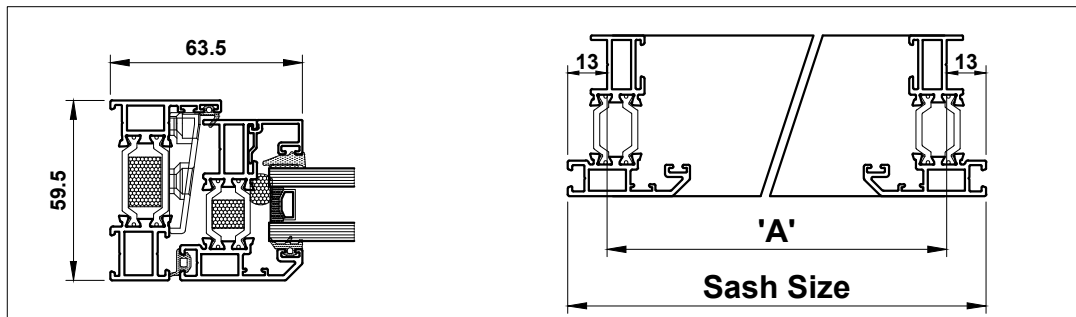
Image	Part Code	Pack	Unit	Application	Colour	
	ACW20029 Handle Fixing Block	1	each		MF	✓
					SA	
					KL	✓
					HP	✓
					BSC	
					SMC	
					PC	
					W	✓
					Z	✓
	ACW20038 4-3mm Tear-away Low-line EPDM Wedge Gasket Black Only	50	m		MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	✓
	ACW20100 L/R Monkey Tail Espag Handle Black or Pewter	1	each	ACW20102 ACW20103 ACW20104 ACW20228 ACW20229	MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
	ACW20101 L/R Bulb End Espag Handle Black or Pewter	1	each	ACW20105 ACW20106 ACW20107 ACW20228 ACW20229	MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
	ACW20102 8" Monkey Tail Peg Stay Black or Pewter	1	each	ACW20100	MF	
					SA	
					KL	
					HP	
					BSC	
					SMC	
					PC	
					W	
					Z	
 T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm	 Screw (Grub)	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
	ACW20103 10" Monkey Tail Peg Stay Black or Pewter	1	each	ACW20100	MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
					Z
					
SA					
KL					
HP					
BSC					
SMC					
PC					
W					
Z					
	ACW20105 8" Bulb End Peg Stay Black or Pewter	1	each	ACW20101	
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
					Z
					
SA					
KL					
HP					
BSC					
SMC					
PC					
W					
Z					
	ACW20107 12" Bulb End Peg Stay Black or Pewter	1	each	ACW20101	
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
					Z
					 <small>T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm</small>

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
	ACW20108 296mm Stainless Steel Peg Stay	1	each	ACSM010	MF
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
					Z
					R 
SA					
KL					
HP					
BSC					
SMC					
PC					
W					
Z					
	ACW20228 24mm Handle Fixing Block	1	each	W20168	
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
					Z
					
SA					
KL					
HP					
BSC					
SMC					
PC					
W					
Z					
 <p>T-BARS ACVG665=2.5mm ACVG666=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour BSC = Brushed Satin Chrome SMC = Smokey Chrome PC = Polished Chrome				
					SA
					KL
					HP
					BSC
					SMC
					PC
					W
					Z
					W = White Z = Black



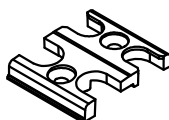
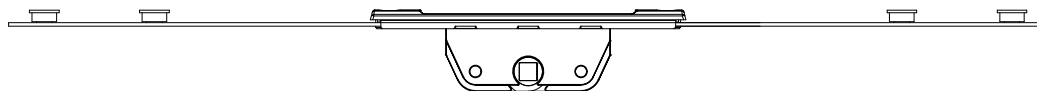
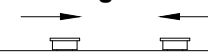
Part Code	Rod Length (mm)	Number of Keeps	Sash Rebate Size ('A')	
			Minimum	Maximum
ACET501L	335	2	340	505
ACET501R				
ACET502L	500	2	506	755
ACET502R				
ACET503L	750	2	756	1005
ACET503R				
ACET504L	1000	4	1006	1255
ACET504R				
ACET505L	1250	4	1256	1400
ACET505R				

Note: To Suit Handles: ACW20100
ACW20101
ACW20165
ACSM010

Cam Locking Direction



Cam Locking Direction



Keep



T-BARS
ACVG665=2.5mm
ACVG666=3.0mm
ACVL150=4.0mm



Screw (Grub)

MF = Mill Finish
SA = Silver Anodised
KL = Basic Colour
HP = Special Colour
BSC = Brushed Satin Chrome
SMC = Smokey Chrome
PC = Polished Chrome

W = White
Z = Black

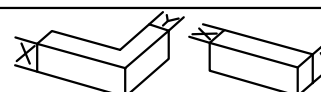




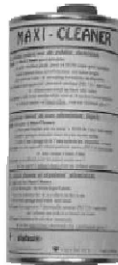


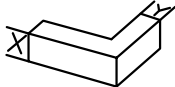
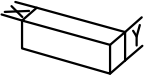


Image	Part Code	Pack	Unit	Application	Colour	
	ACMX09700 Alu. Polish	1	each		MF	✓
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
	ACMX09761 Maxi Gloss	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
	ACMX09762 Alu. Bright	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
	ACMX09763 Teflon Spray	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
	ACMX09764 Maxi Clean	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
 T-BARS ACVG665=2.5mm ACVG666=3.0mm ACVL150=4.0mm	 Screw (Grub)	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour	M = Dual Colour GOZ = Gold W = White Z = Black	 		

STANDARD ACCESSORIES

Image	Part Code	Pack	Unit	Application	Colour
	ACMX09765 Alu. Cleaner	1	each		MF SA KL HP M GOZ W Z PC
	ACMX09770 Roll & Wrap 100mm	1	each		MF SA KL HP M GOZ W Z PC
	ACMX09775 Grip Handwrap	1	each		MF SA KL HP M GOZ W Z PC
	ACMX09801 Protective Tape 50mm	1	each		MF SA KL HP M GOZ W Z PC
	ACMX09802 Protective Tape 70mm	1	each		MF SA KL HP M GOZ W Z PC
 <p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p>  <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour	M = Dual Colour GOZ = Gold W = White Z = Black		 	









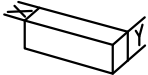



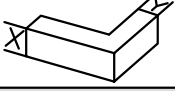
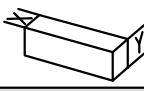
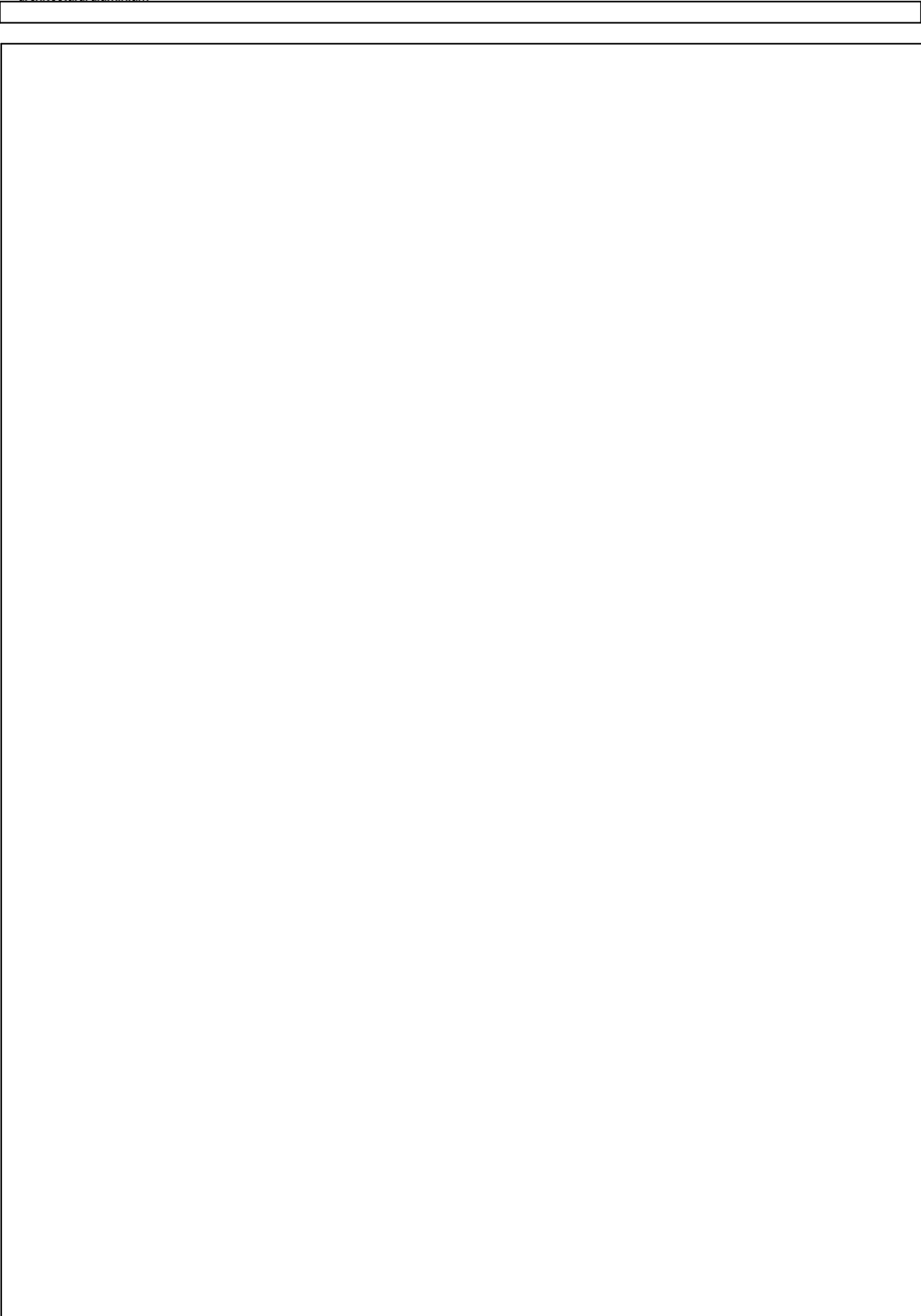
Image	Part Code	Pack	Unit	Application	Colour	
	ACMX09803 Protective Tape 100mm	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
	ACSIL04 Sealing Glue Order with suffix of KL colour (eg.ACSIL04KL005) or BL=Black/WP=White/ CL=Clear	1	each		MF	
					SA	
					KL	✓
					HP	
					M	
					GOZ	
					W	✓
					Z	✓
					PC	
	ACSIL05 Rubber Sealant	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
	ACSIL08 Silicon Gun	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
	ACSIL013 Glue for Mitre	1	each		MF	
					SA	
					KL	
					HP	
					M	
					GOZ	
					W	
					Z	
					PC	
 T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm	 Screw (Grub)	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour	M = Dual Colour GOZ = Gold W = White Z = Black	 		

Image	Part Code	Pack	Unit	Application	Colour
	ACSIL014 Anti-Corrosion Coating	1	each		MF <input checked="" type="checkbox"/>
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					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					M <input type="checkbox"/>
					GOZ <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					PC <input type="checkbox"/>
					
SA <input type="checkbox"/>					
KL <input type="checkbox"/>					
HP <input type="checkbox"/>					
M <input type="checkbox"/>					
GOZ <input type="checkbox"/>					
W <input type="checkbox"/>					
Z <input type="checkbox"/>					
PC <input type="checkbox"/>					
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					M <input type="checkbox"/>
					GOZ <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					PC <input type="checkbox"/>
SA <input type="checkbox"/>					
KL <input type="checkbox"/>					
HP <input type="checkbox"/>					
M <input type="checkbox"/>					
GOZ <input type="checkbox"/>					
W <input type="checkbox"/>					
Z <input type="checkbox"/>					
PC <input type="checkbox"/>					
 <p>T-BARS ACVG665=2.5mm ACVG666=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour				
					 

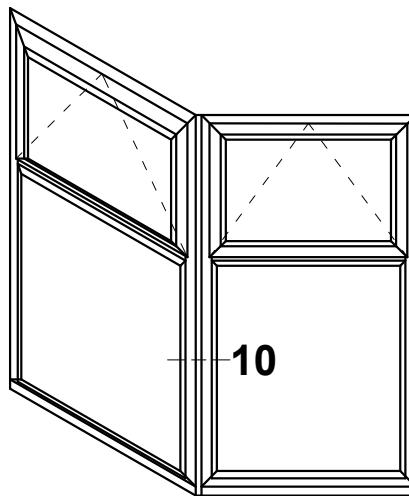
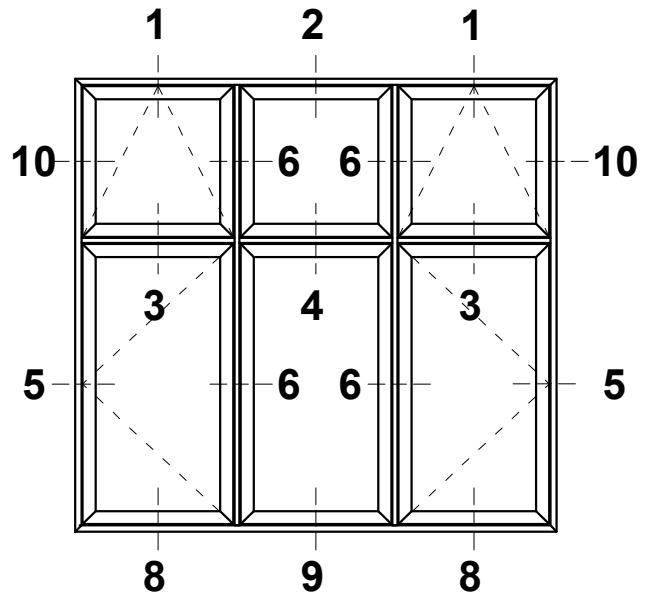
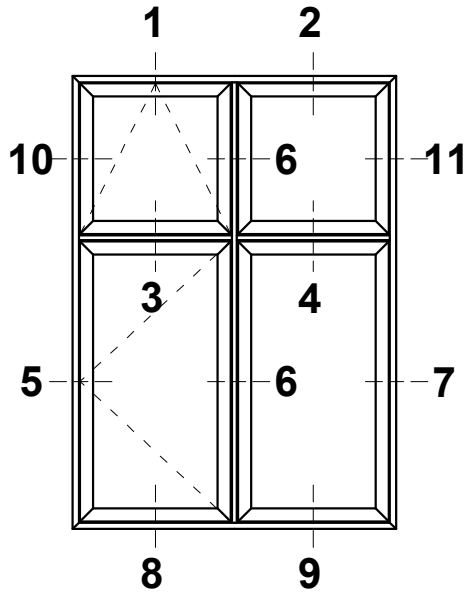
Section C

Sections

Scale Elevations

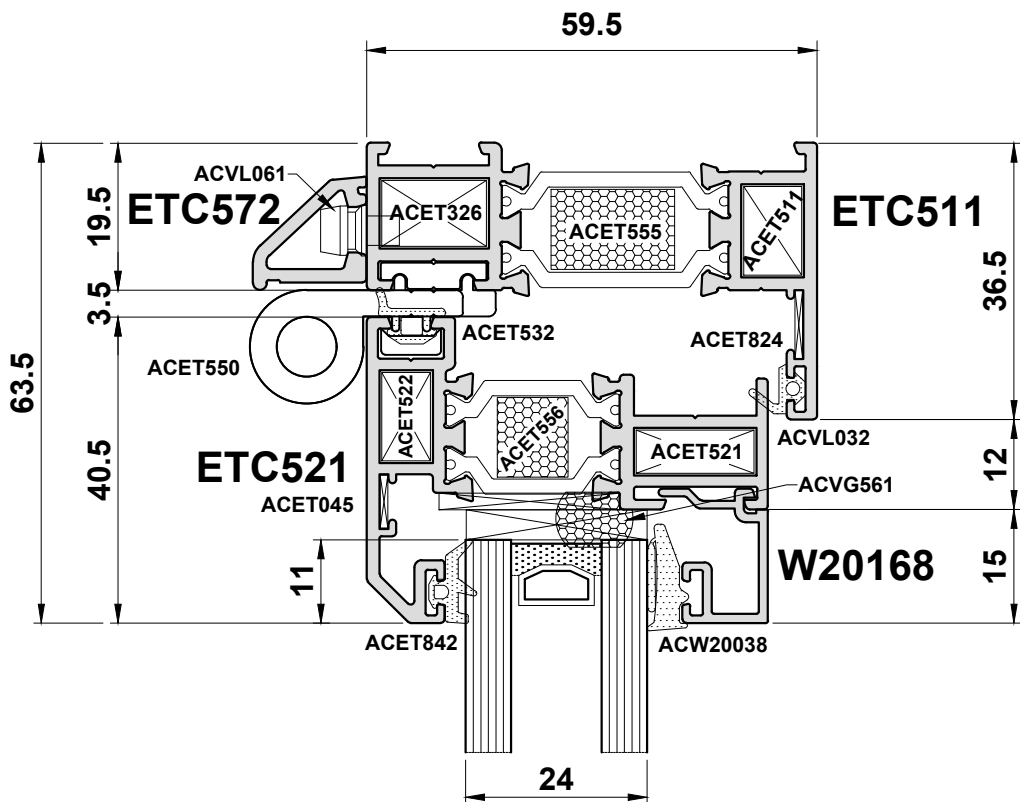
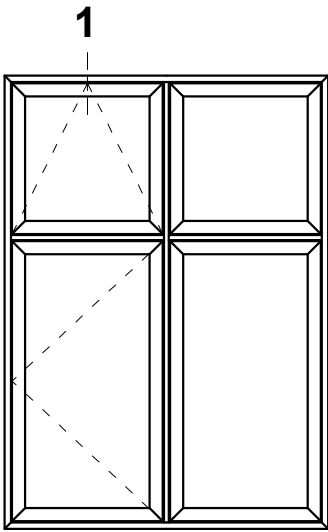


Detail



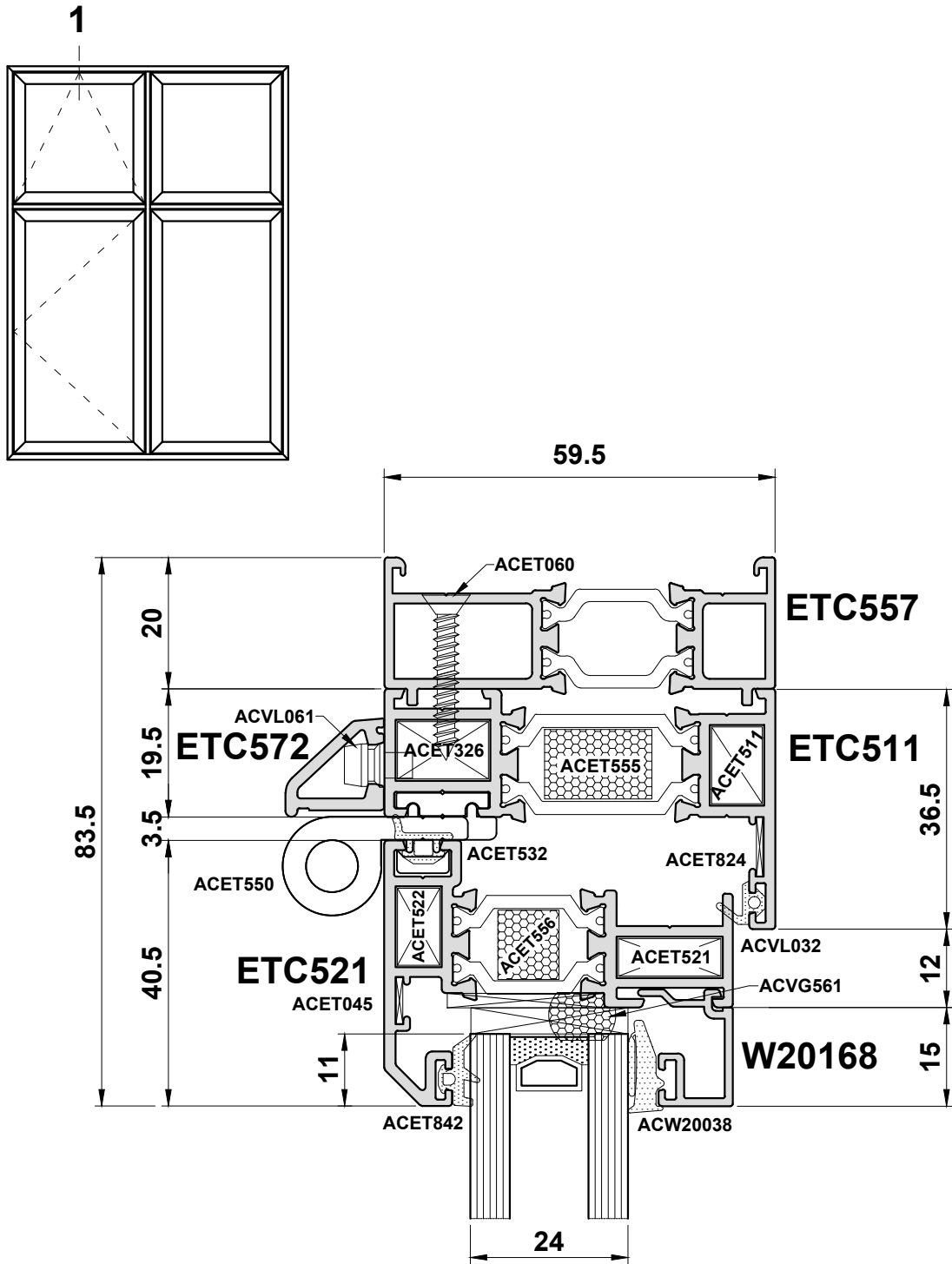
Do Not Scale From This Drawing

Detail 1a



Do Not Scale From This Drawing

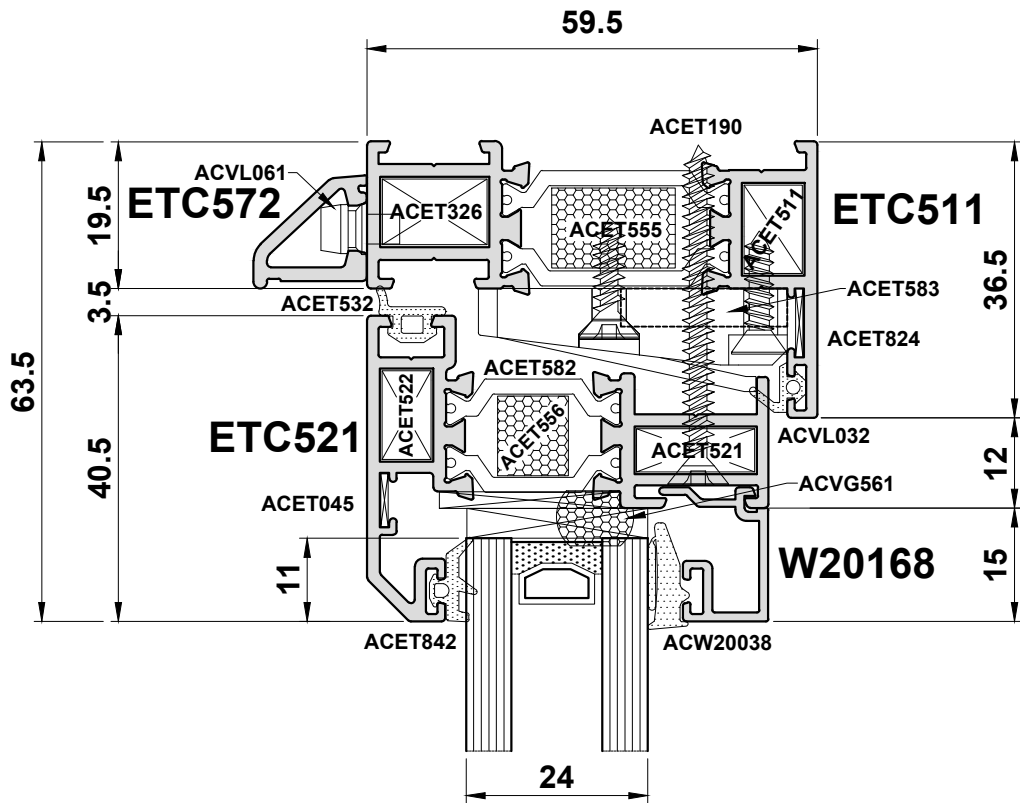
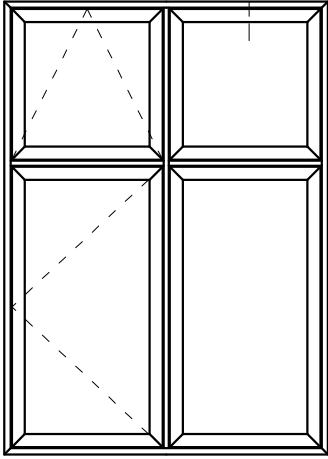
Detail 1b



Do Not Scale From This Drawing

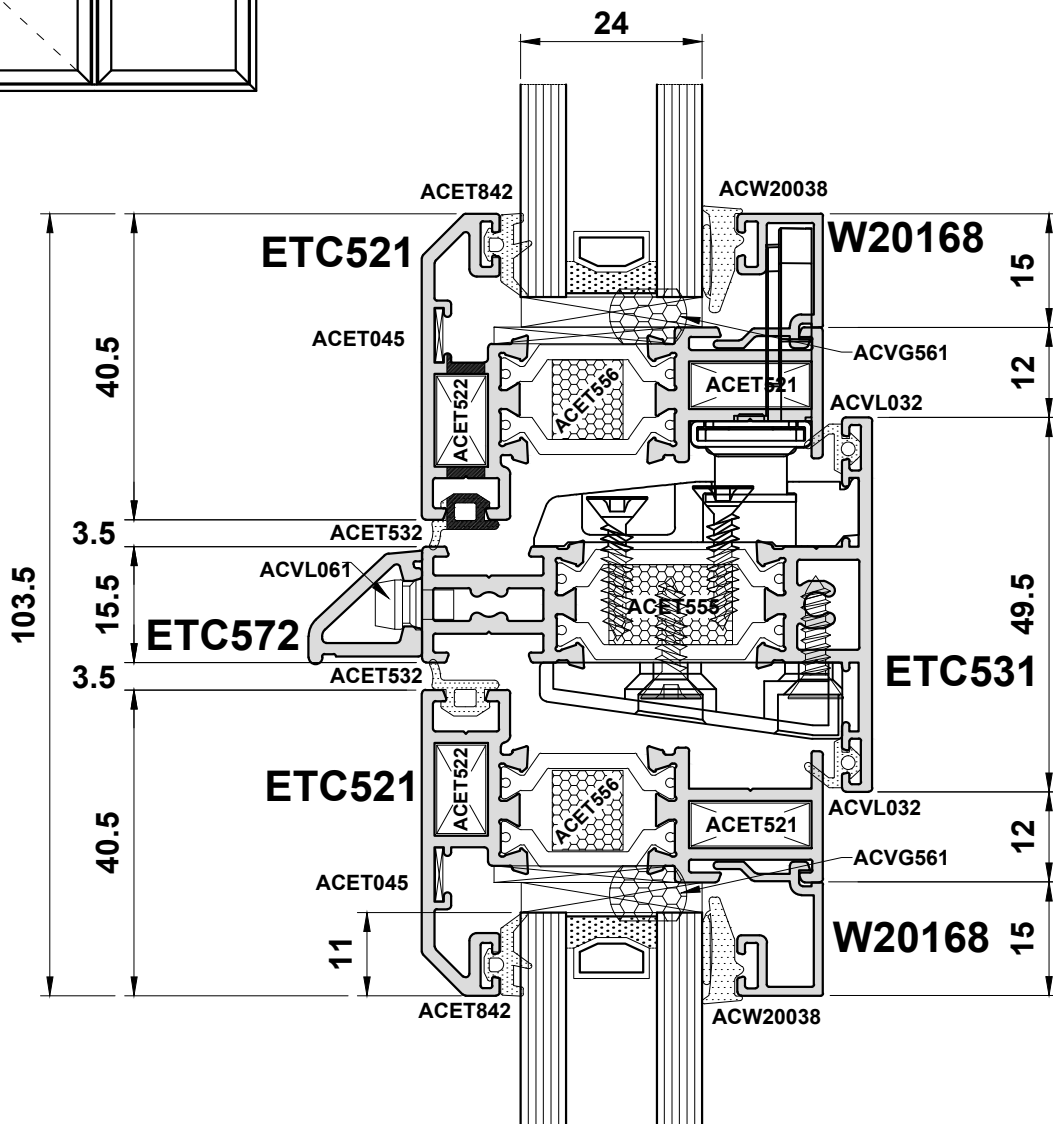
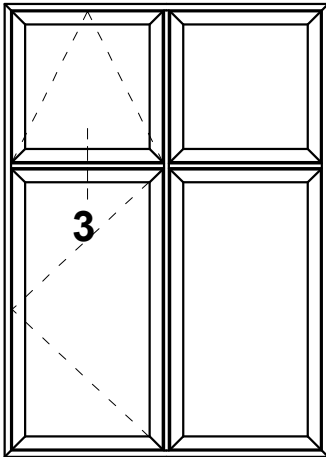
Detail 2

2



Do Not Scale From This Drawing

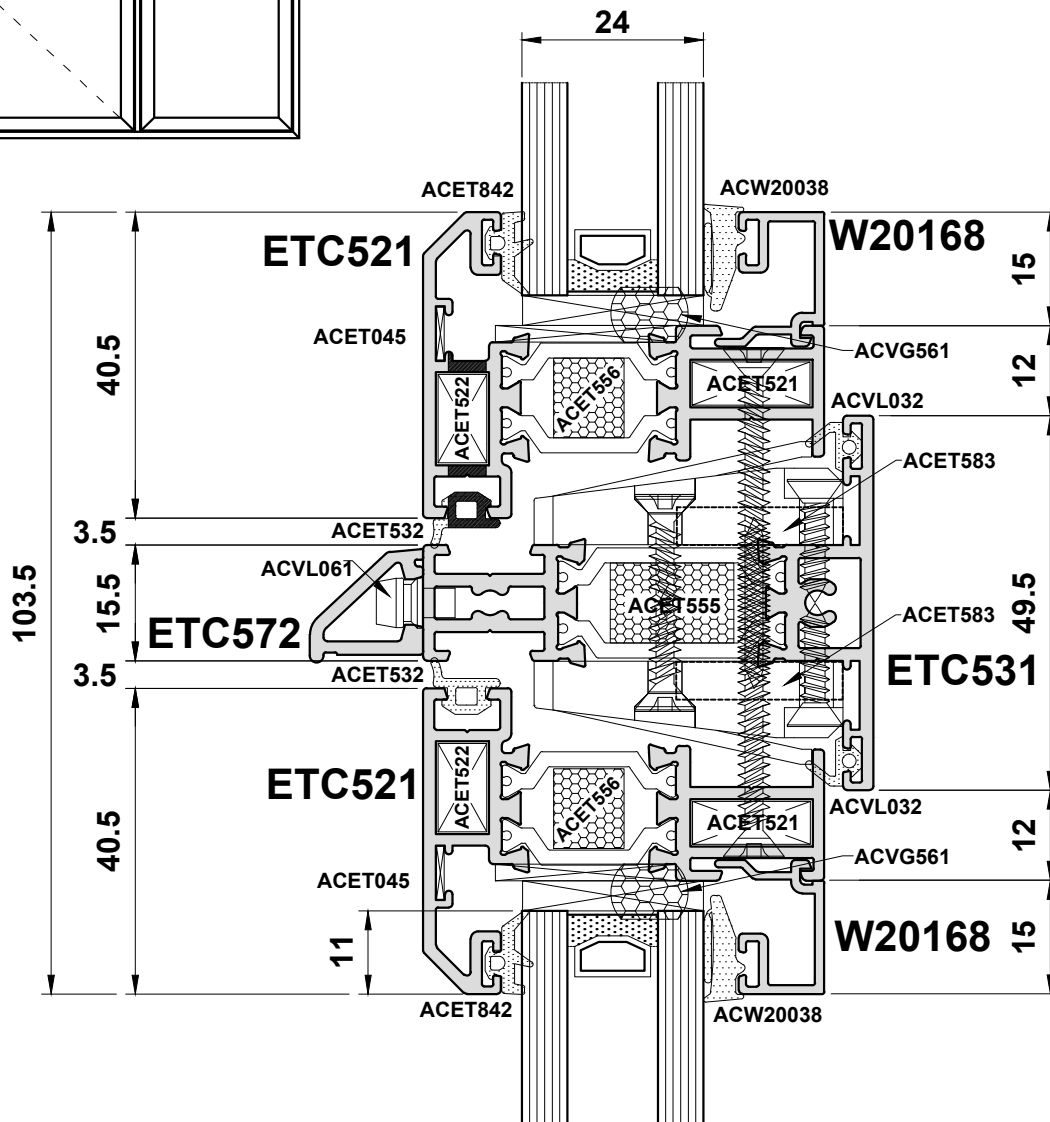
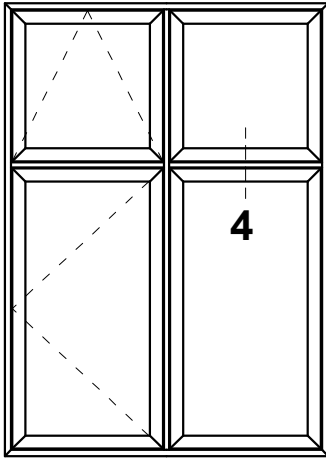
Detail 3



Note: Transoms will drain through the join to the outerframe.

Do Not Scale From This Drawing

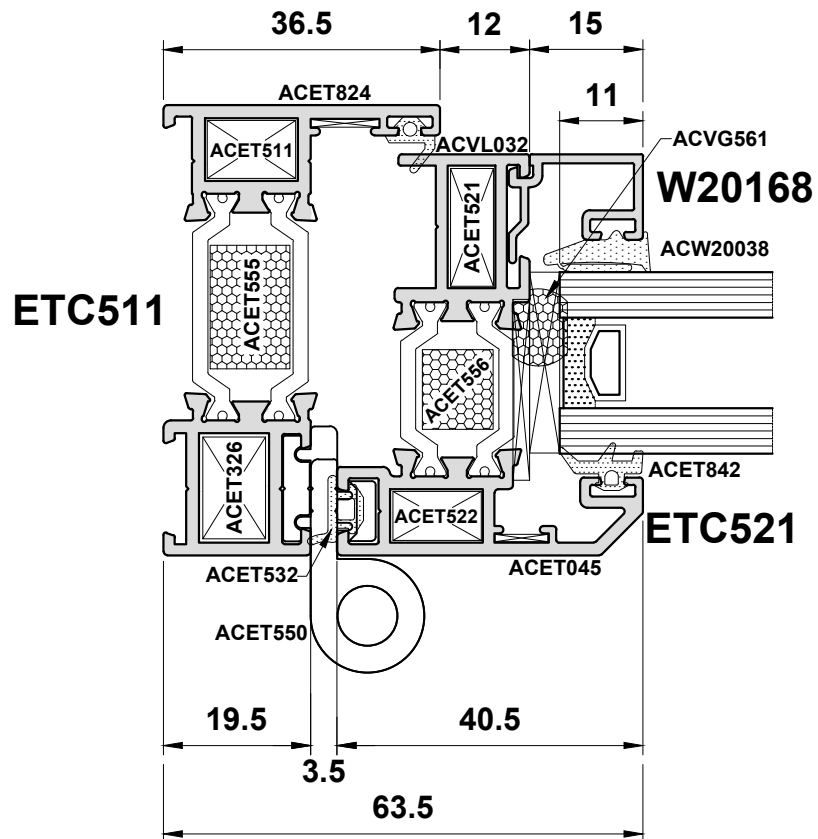
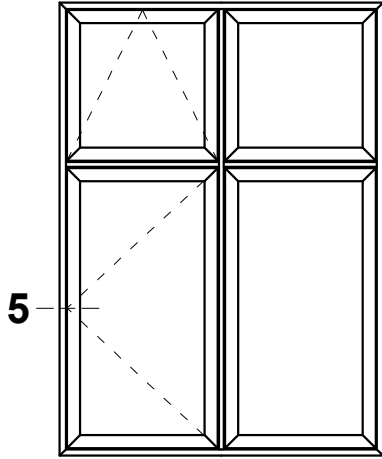
Detail 4



Note: Transoms will drain through the joint to the outerframe.

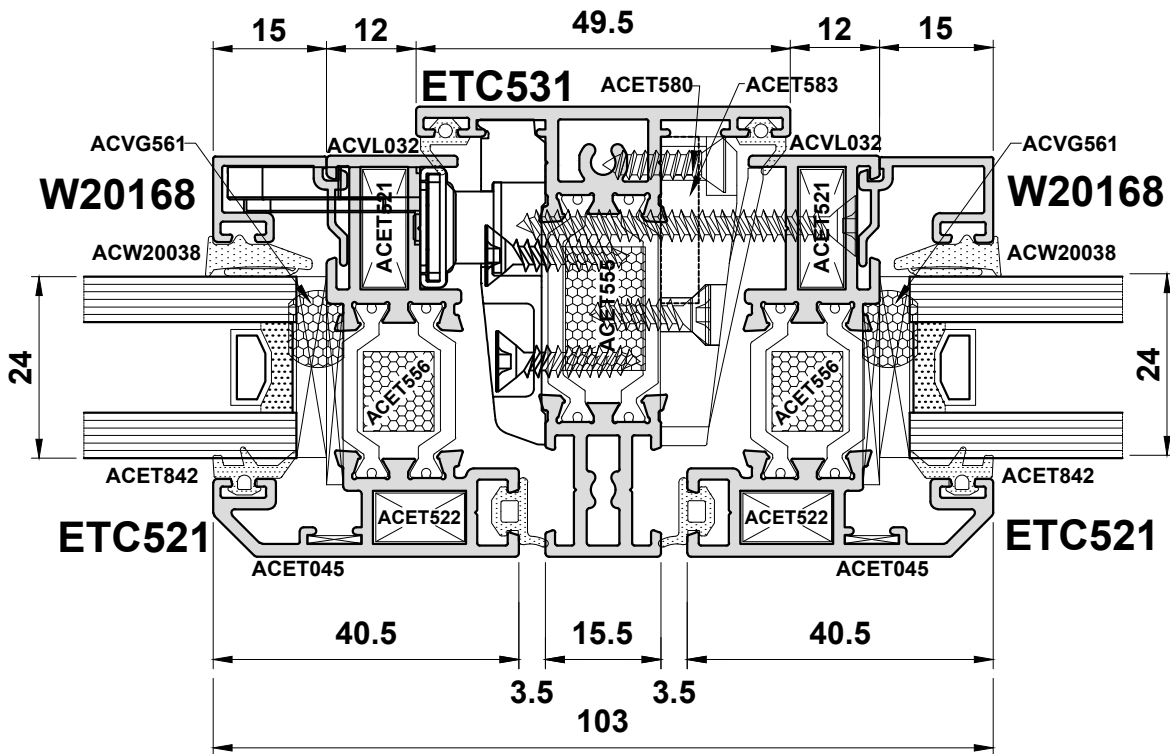
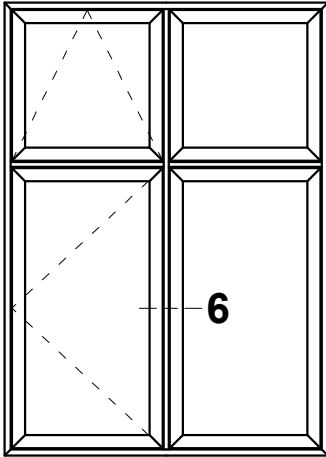
Do Not Scale From This Drawing

Detail 5



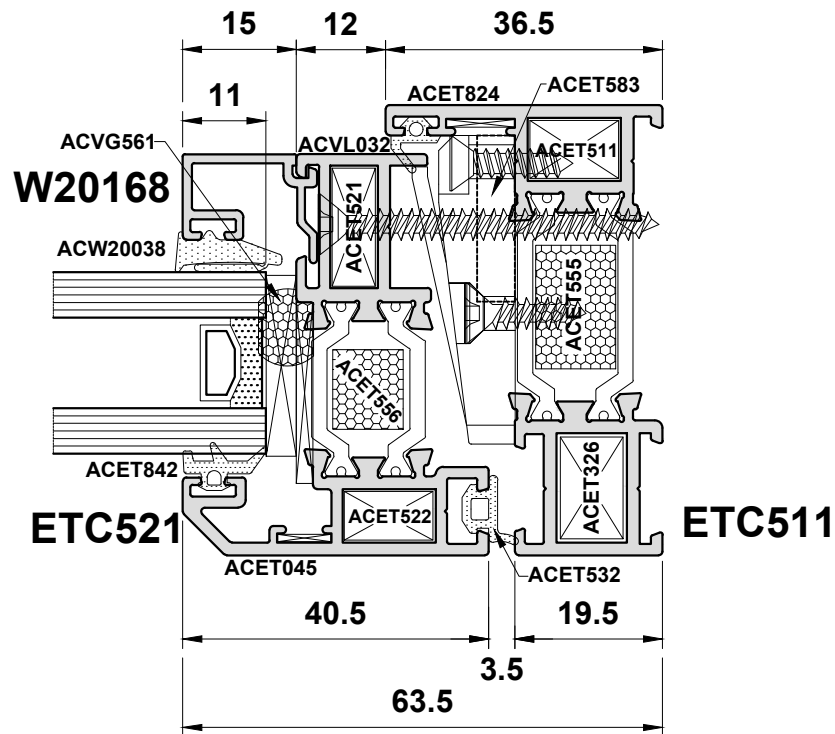
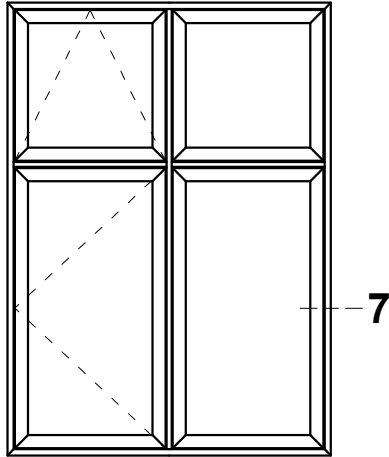
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Detail 6



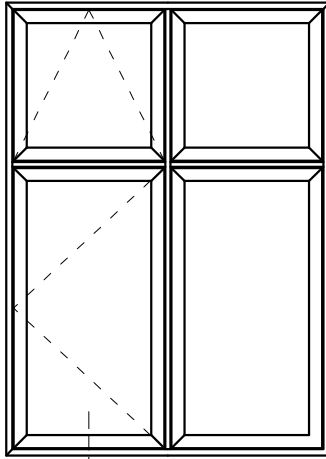
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Detail 7

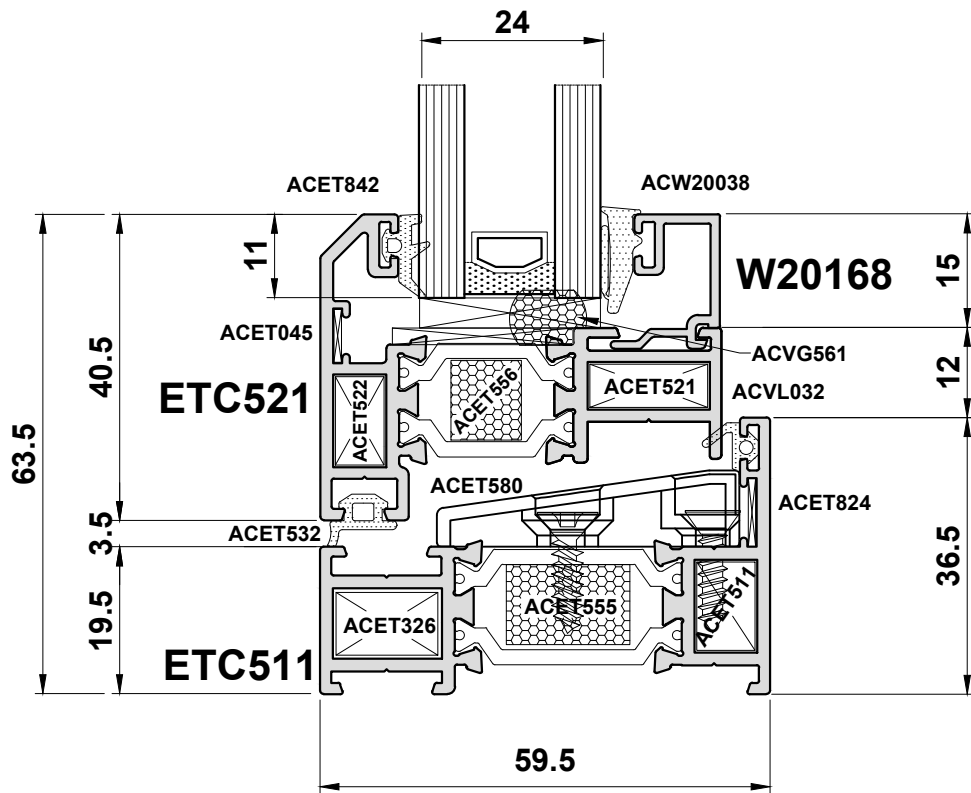


Do Not Scale From This Drawing

Detail 8A

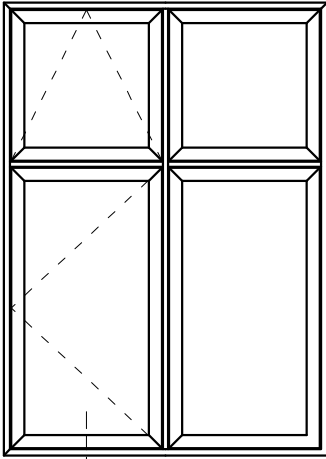


8

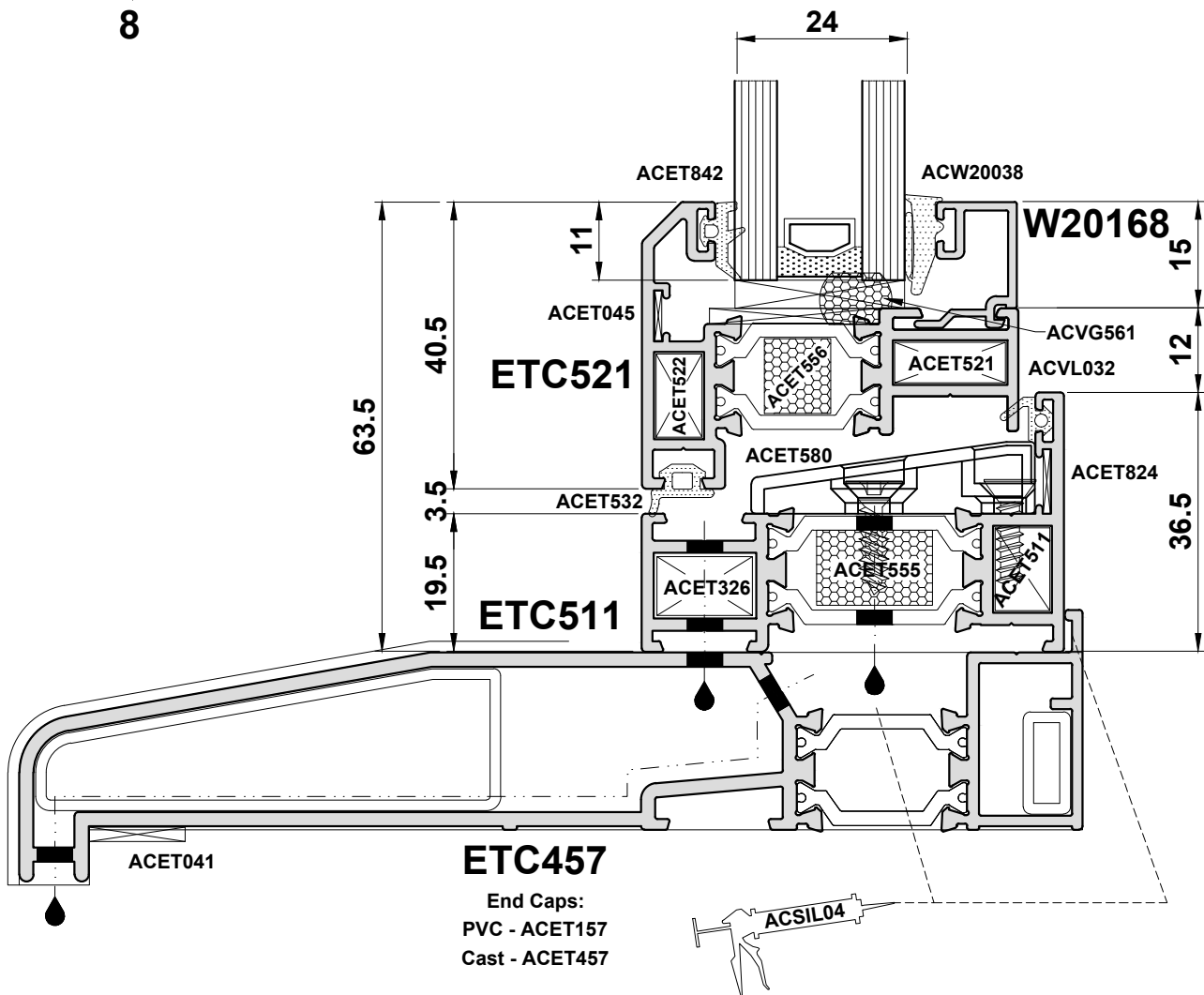


Do Not Scale From This Drawing

Detail 8B

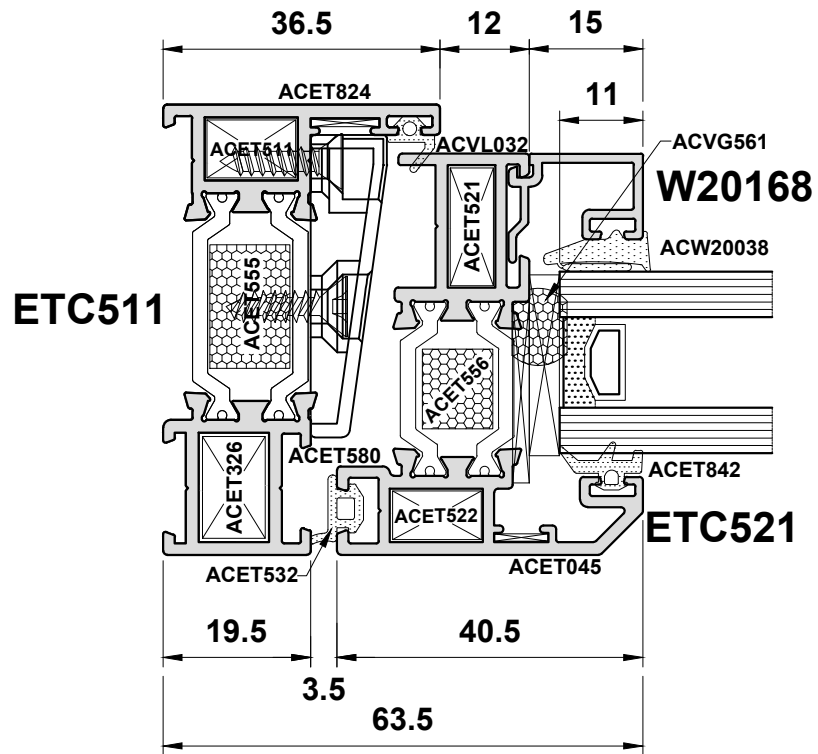
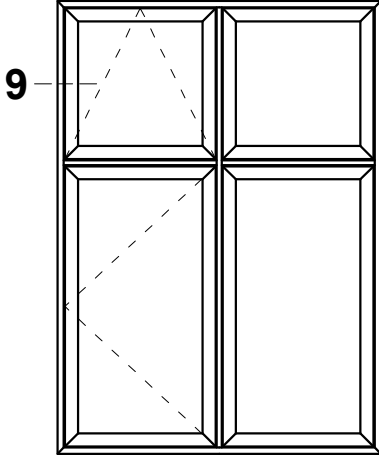


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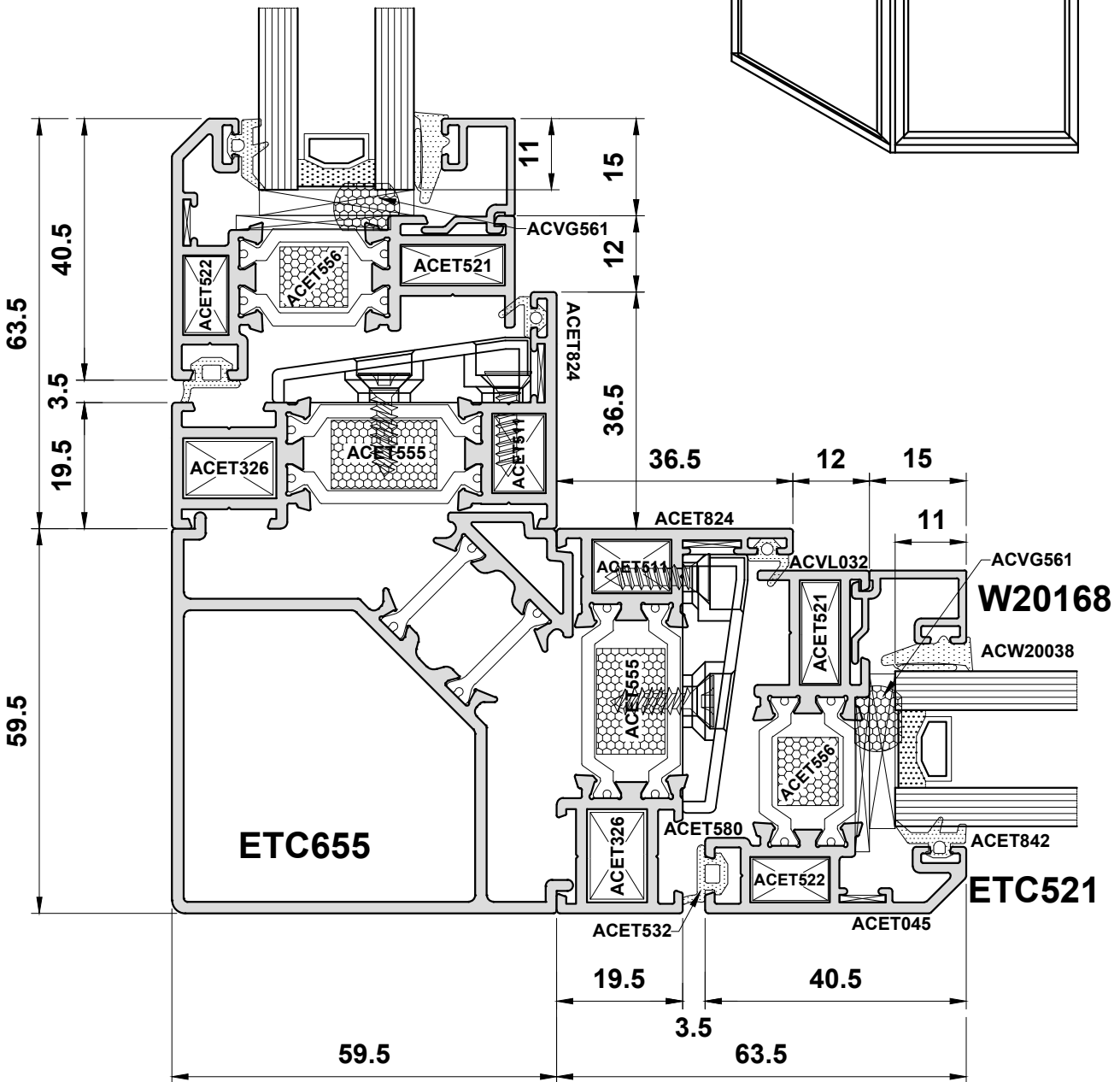
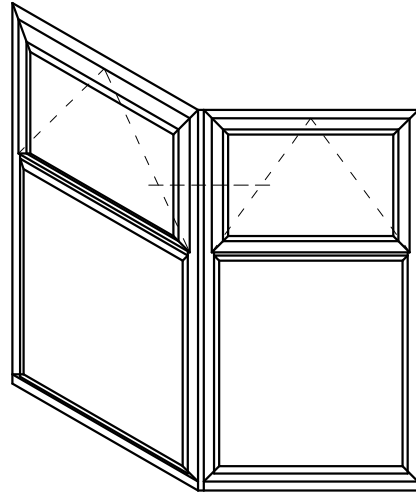
Do Not Scale From This Drawing

Detail 9



Do Not Scale From This Drawing

Detail 10

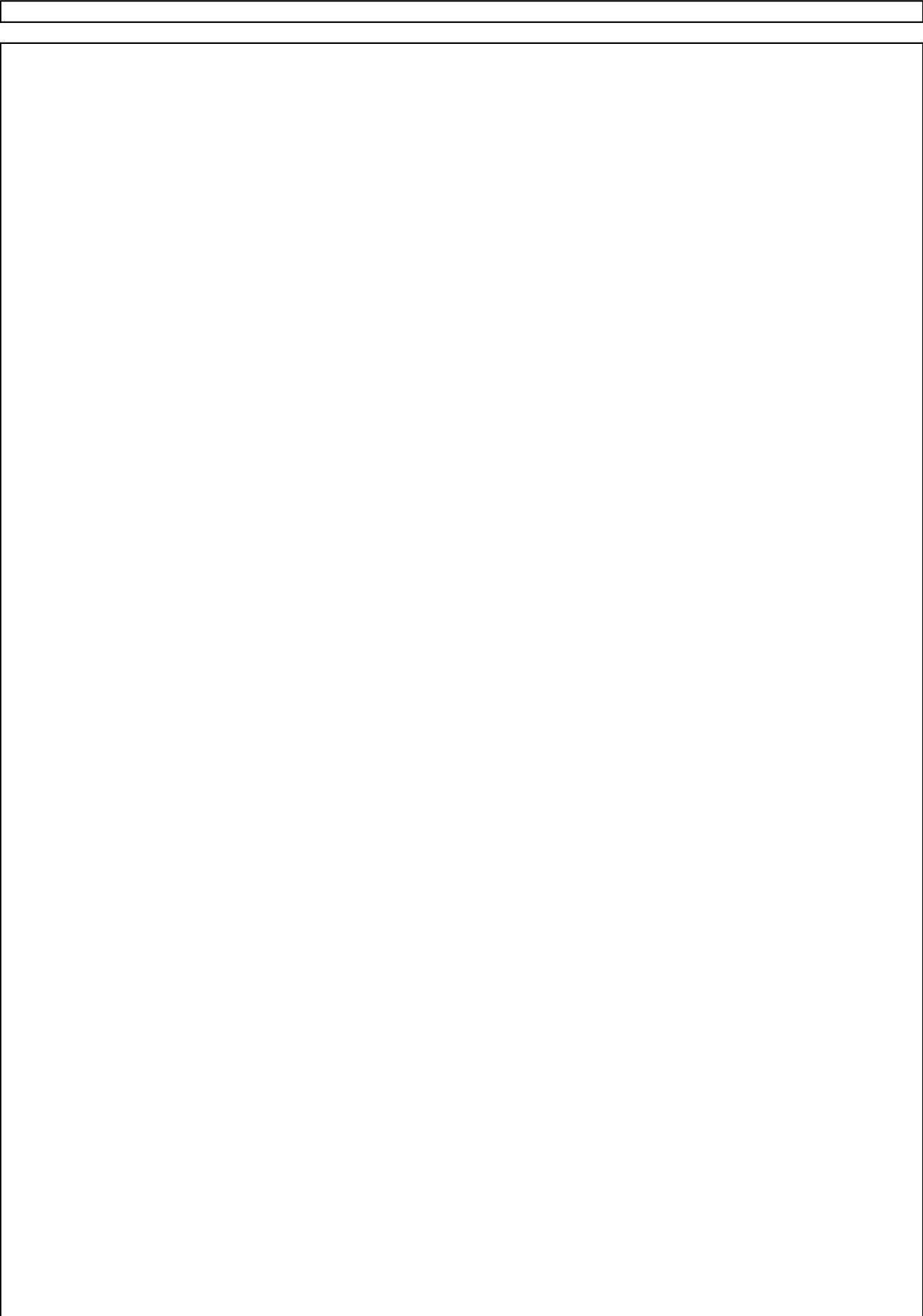


Do Not Scale From This Drawing

Section D

Statics

**For Wind Loading Limitations, Please Contact
The Technical Department - T: 01934 876 100**



Section E

Construction Drawings

Index

E ETC

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E 5

5 - Hinges Page E09 - E11

E 6

6 - Locking Hardware..... Page E12 - E13

E 7

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9 - Beading, Glazing & Astragal Bar..... Page E18 - E19

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IF IN DOUBT ASK!

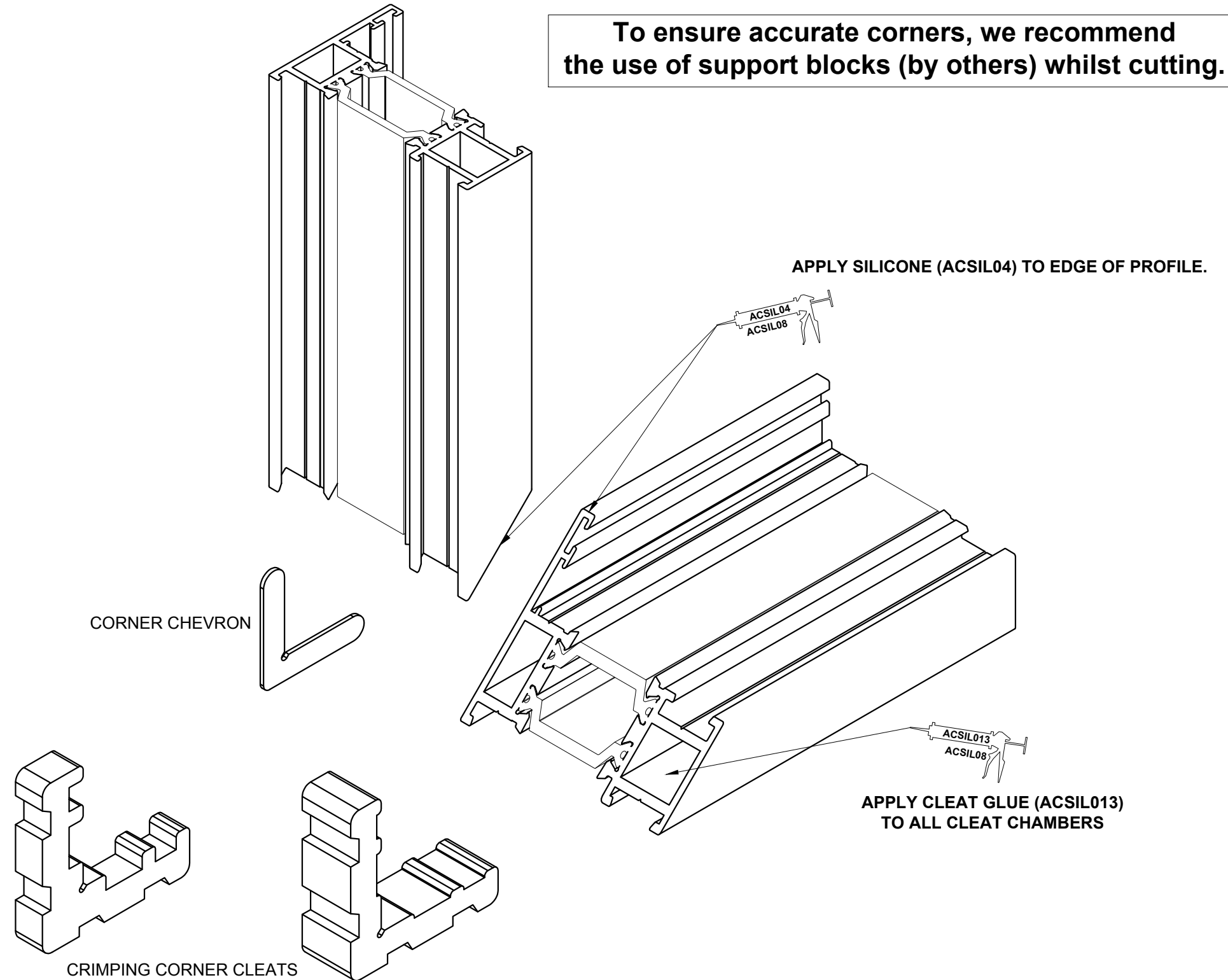
Typical Corner Detail

Notes

1. Degrease mitre sections
2. Cover mitred faces with ACSIL04
3. Apply ACSIL013 to cleat chambers
4. Apply ACSIL04 to any fractures formed by crimping to make watertight

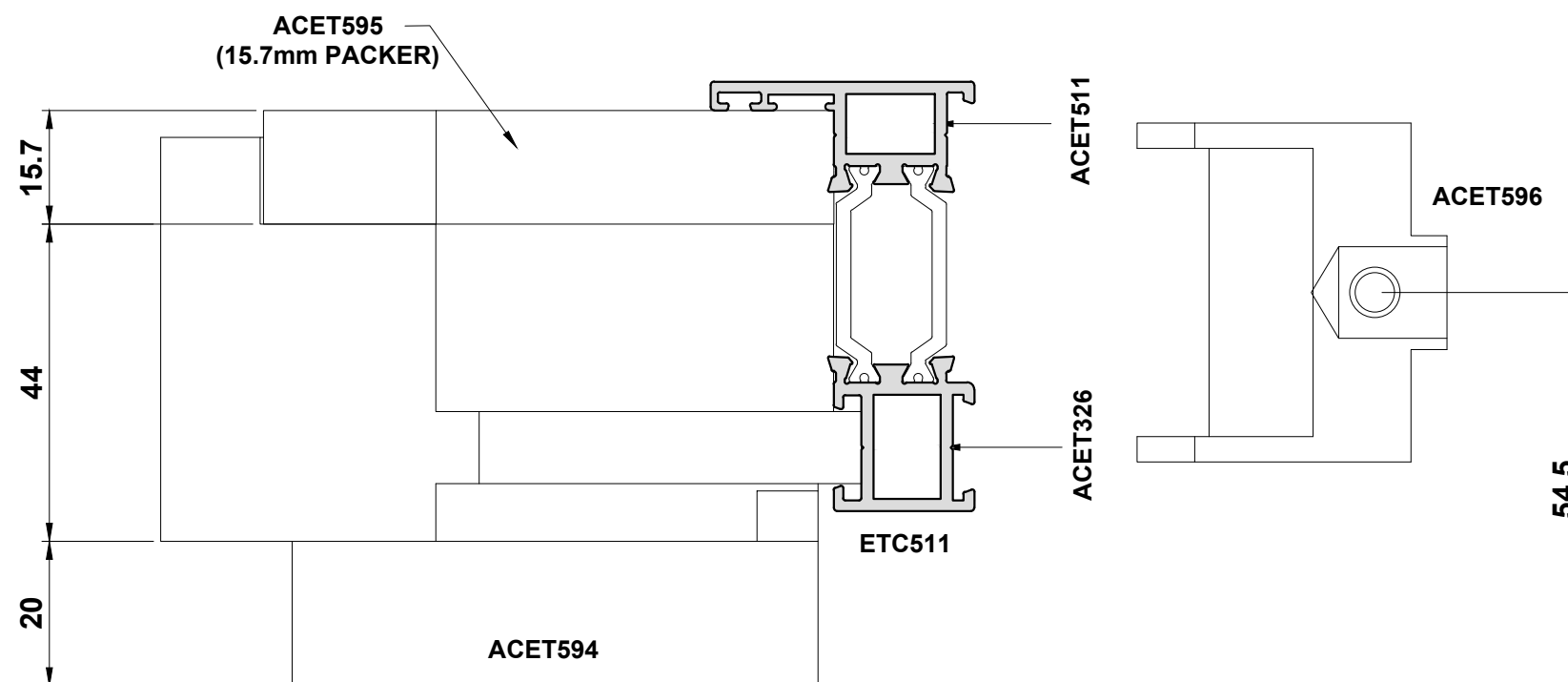
KL Colour	Sealant Part Number
Black	ACSIL04BL
White	ACSIL04WP
Clear	ACSIL04CL
KL001	ACSIL04KL001
KL002	ACSIL04KL002
KL003	ACSIL04KL003
KL004	ACSIL04KL004
KL005	ACSIL04KL005
KL006	ACSIL04KL006
KL007	ACSIL04KL007
KL010	ACSIL04KL010
KL011	ACSIL04KL011
KL012	ACSIL04KL012
KL013	ACSIL04KL013

To ensure accurate corners, we recommend the use of support blocks (by others) whilst cutting.

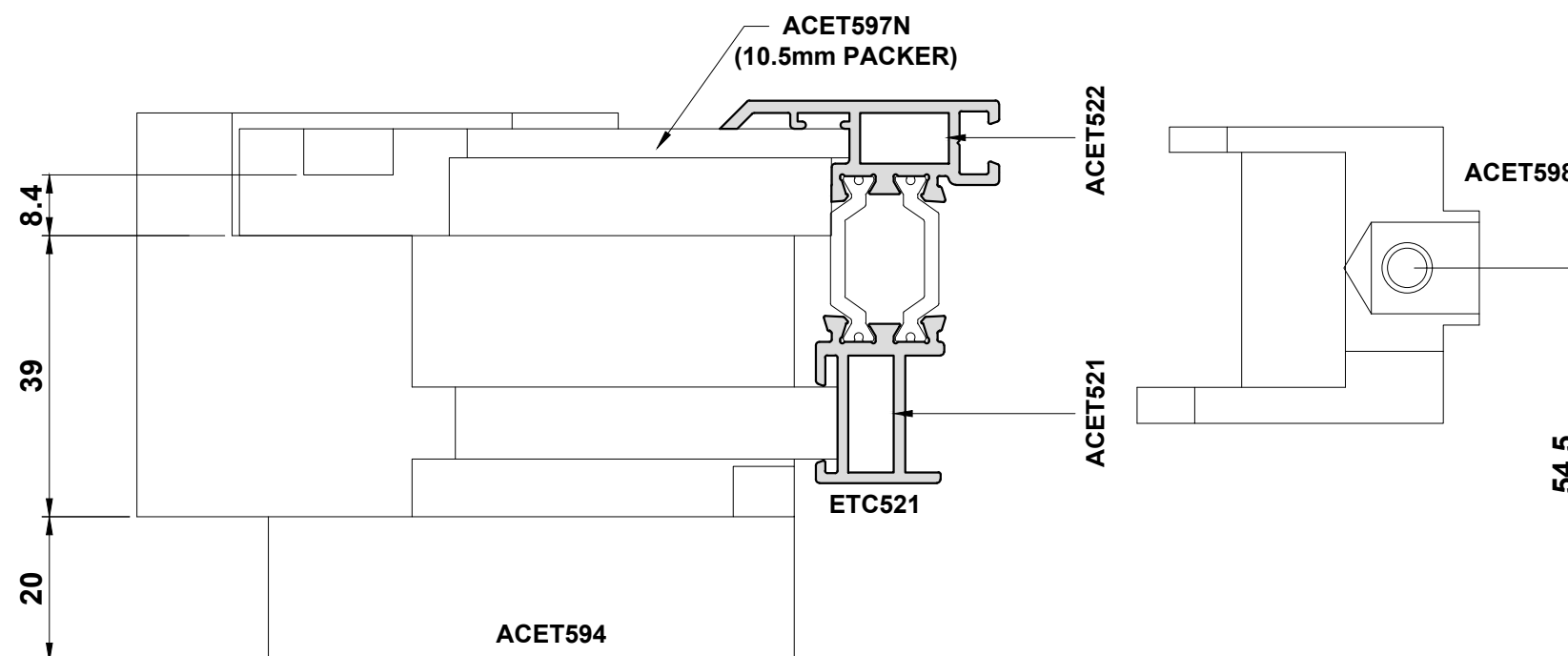


Do Not Scale From This Drawing

Corner Assembly - Crimping Cleats



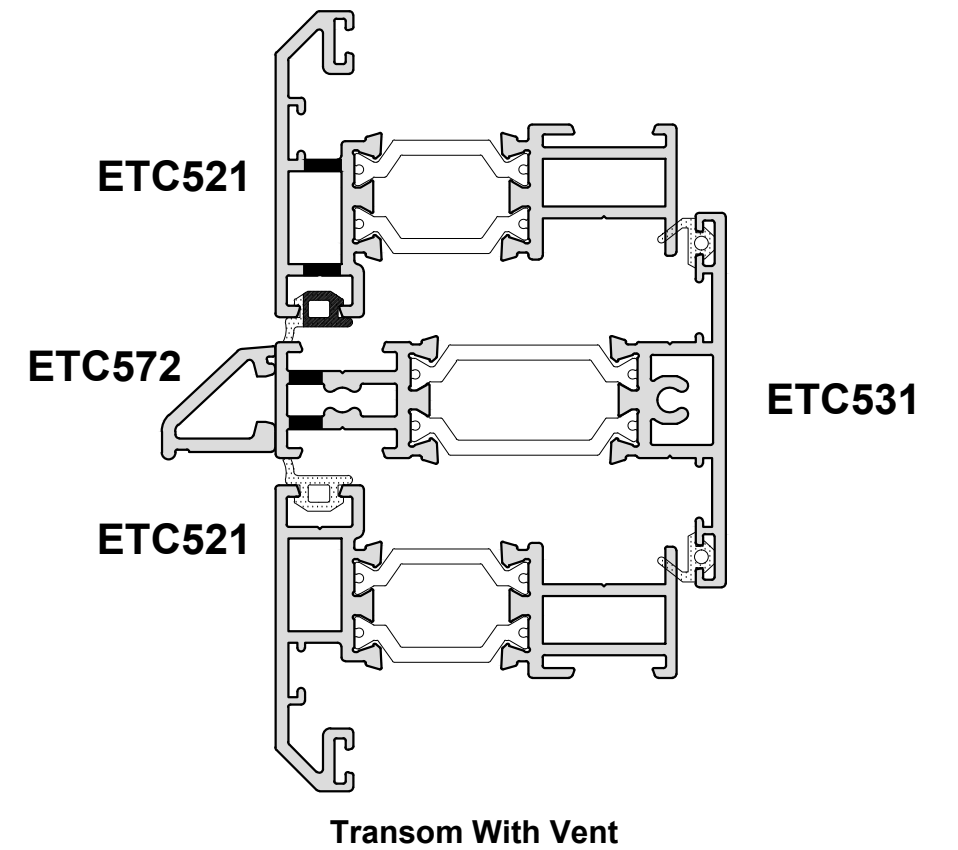
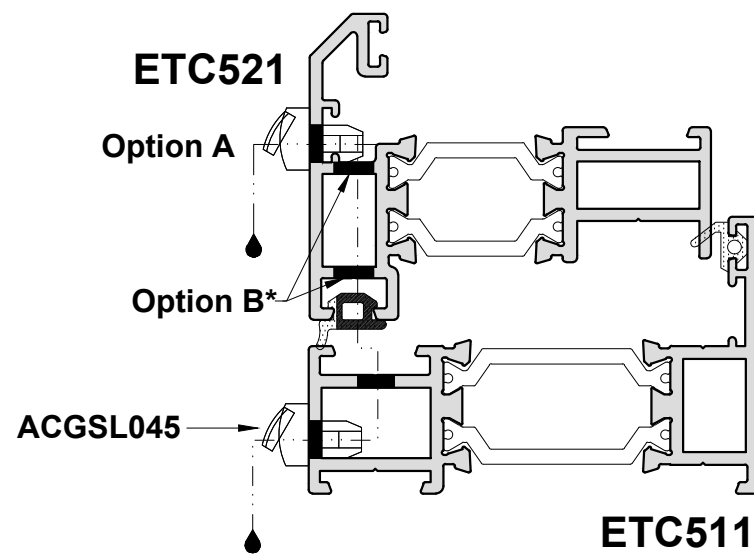
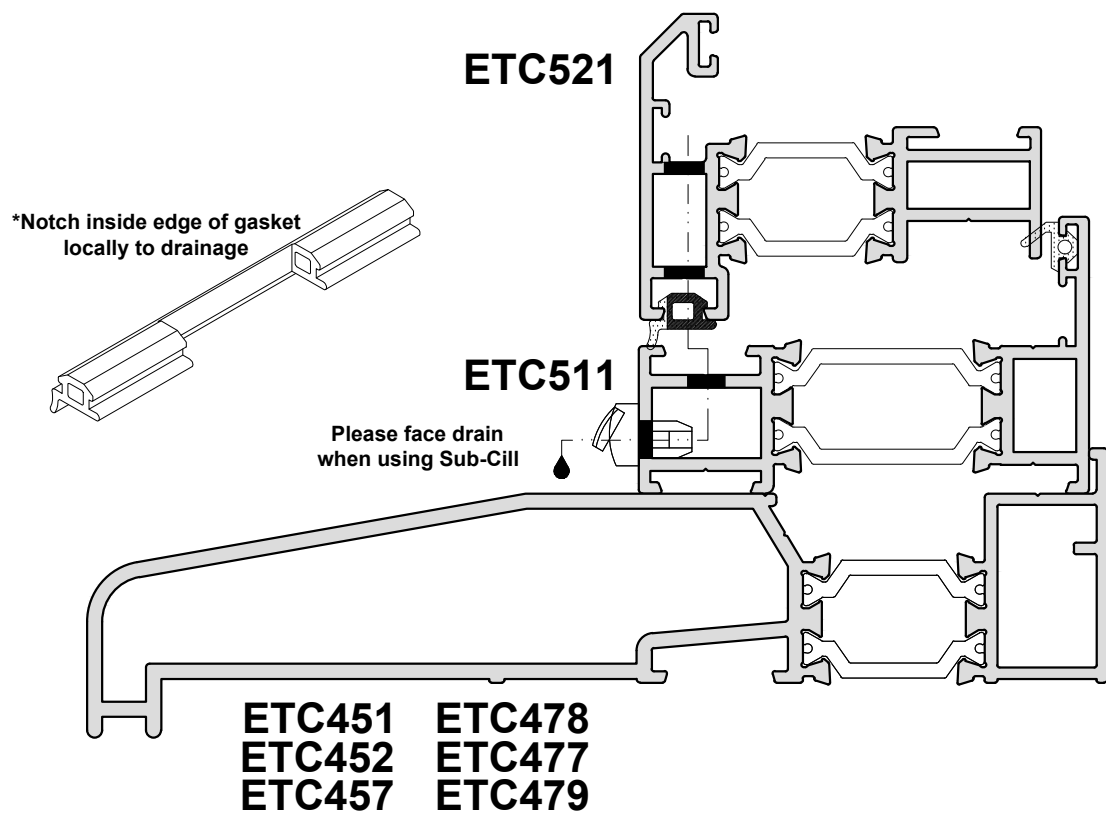
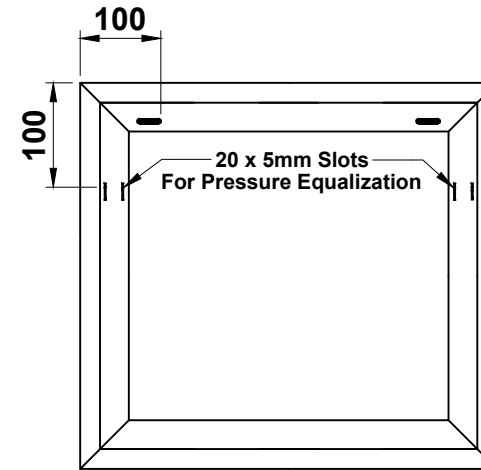
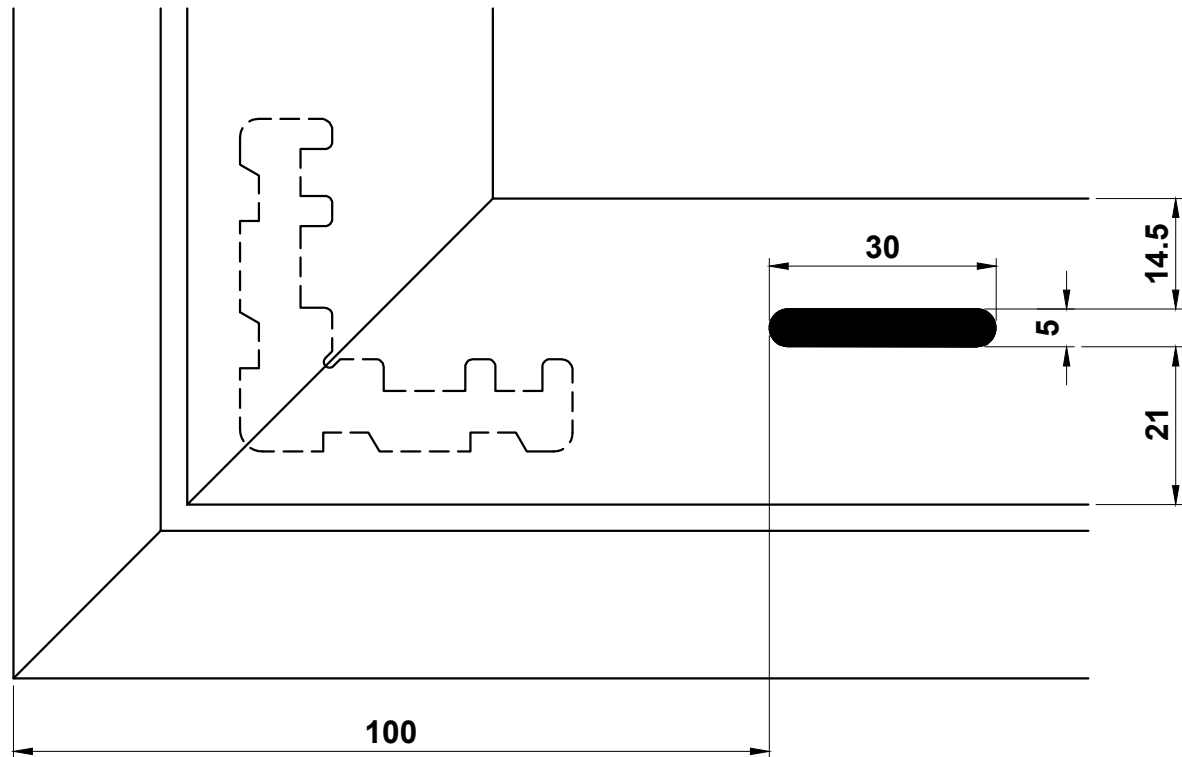
Manual Crimper = WUT024HSZA



Do Not Scale From This Drawing

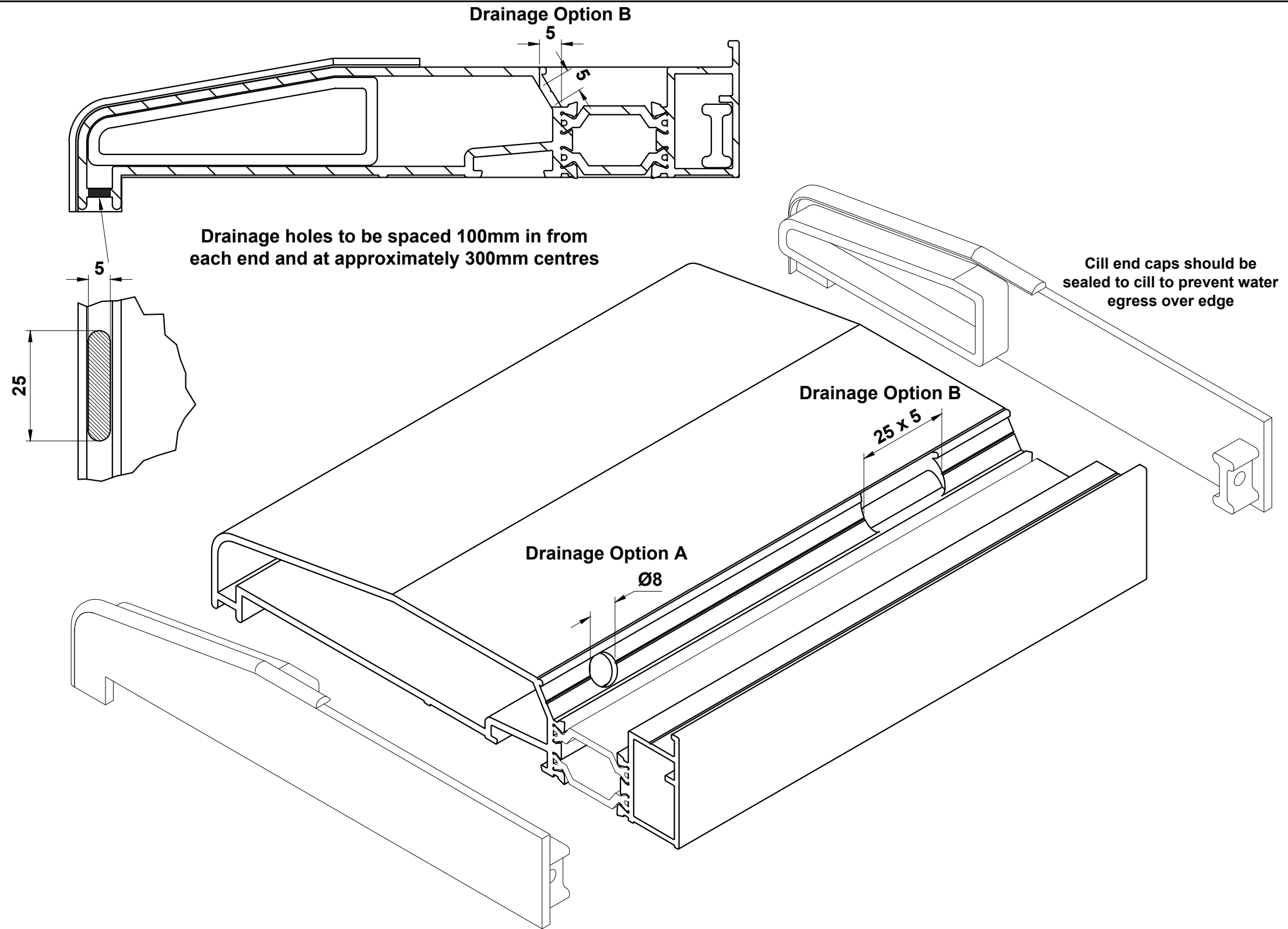
Window Drainage

Important Note: All exposed aluminium should be coated using ACSIL014 or painted to match the frame.



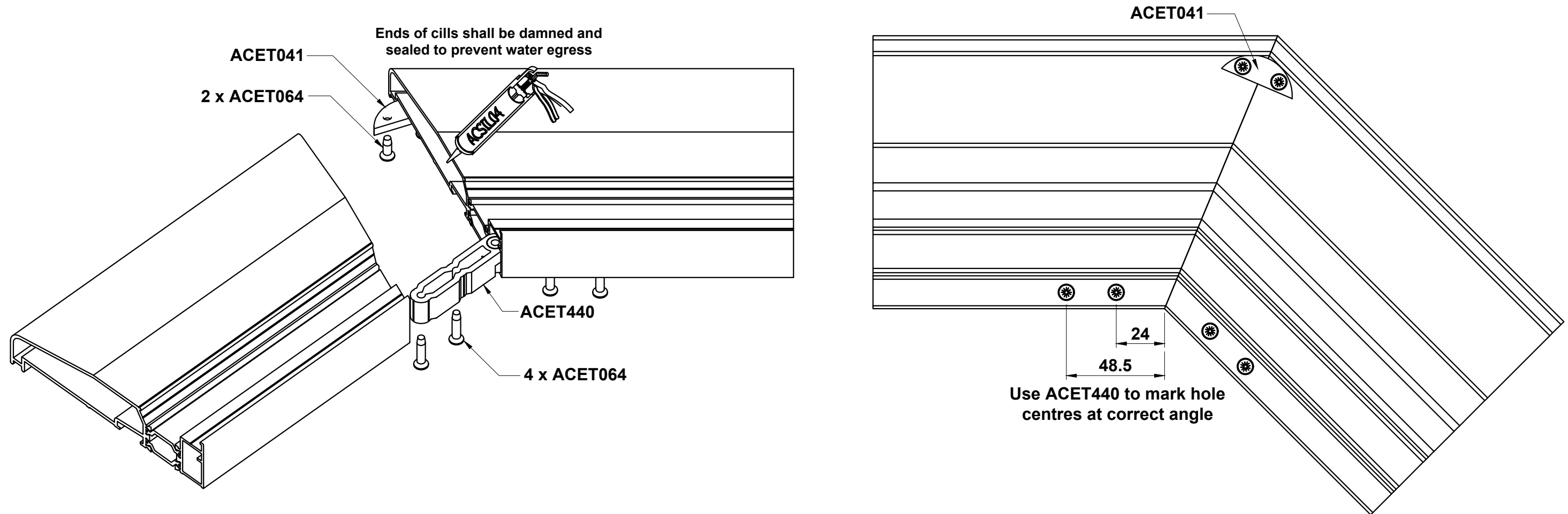
Do Not Scale From This Drawing

Cill Drainage



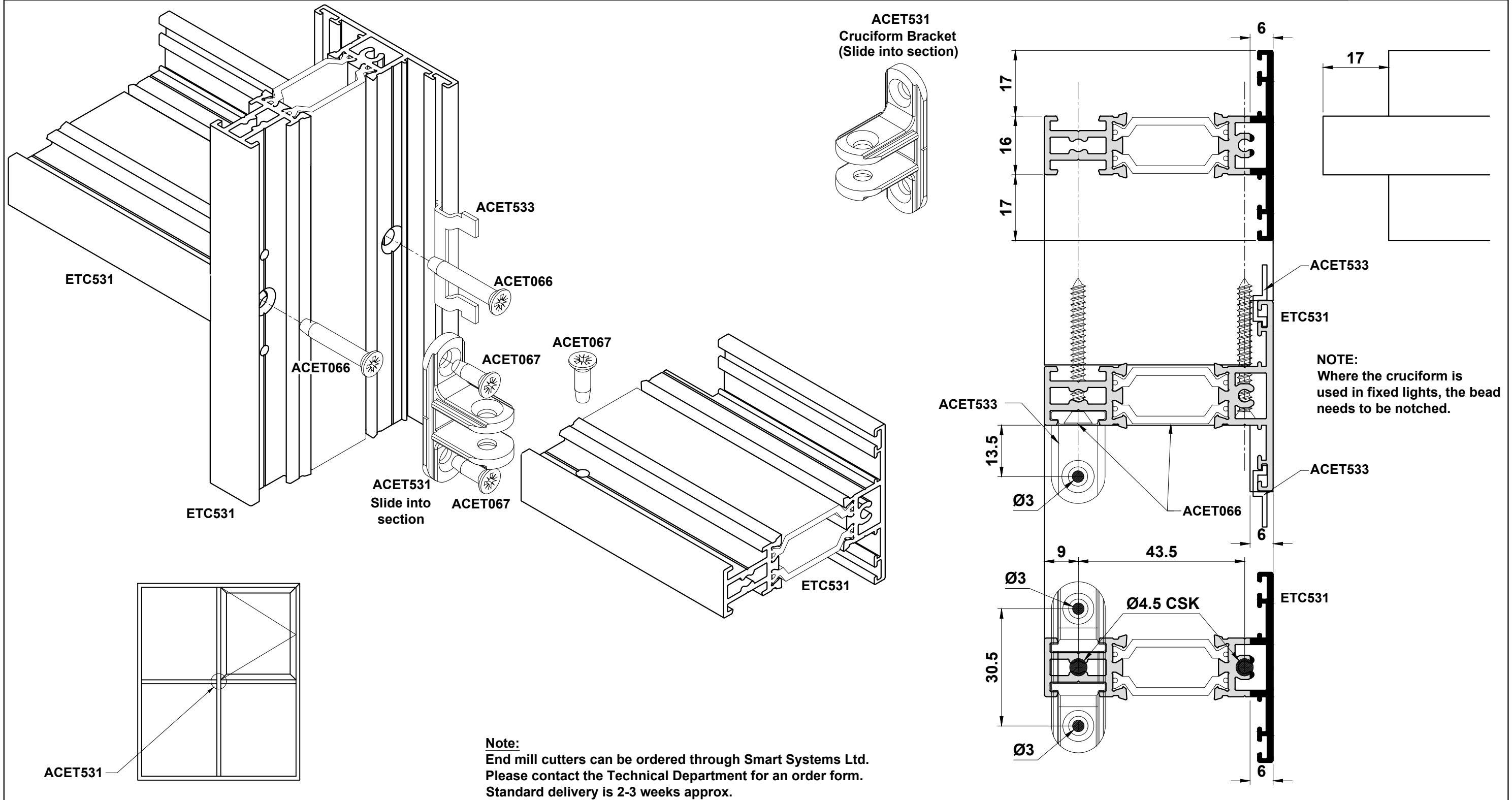
Do Not Scale From This Drawing

Angled Sub Cill



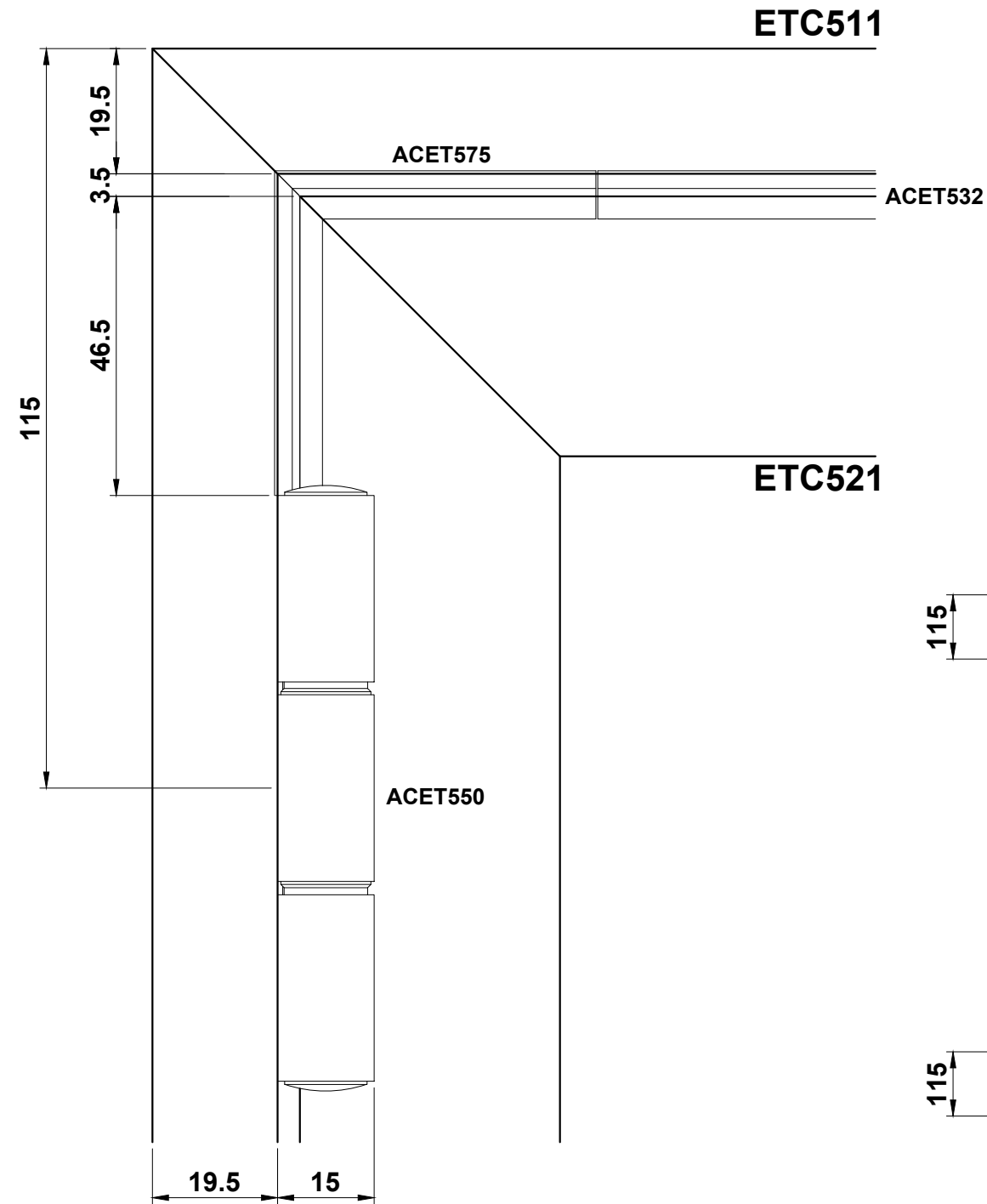
Do Not Scale From This Drawing

Transom/Mullion Preparation

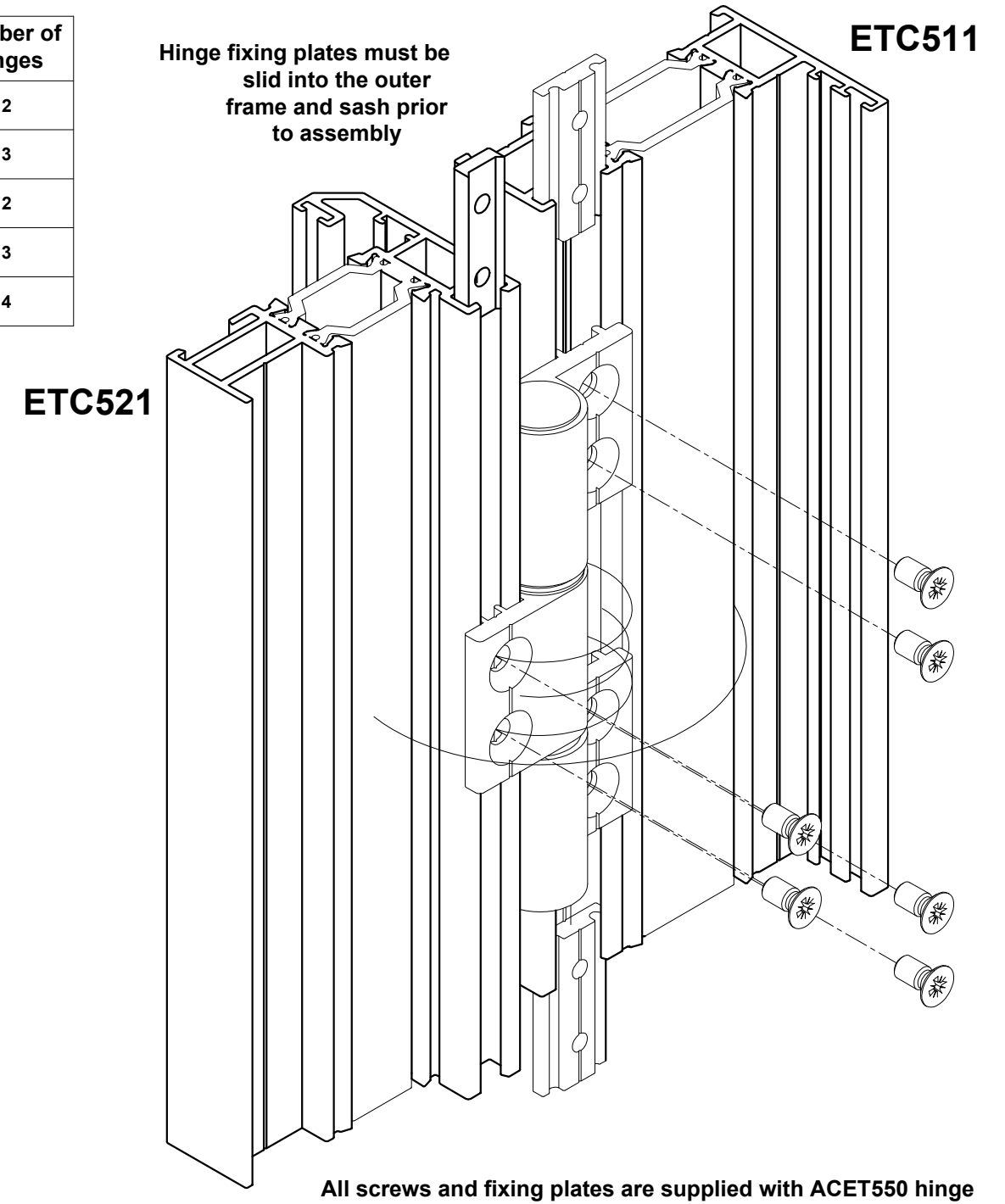


Do Not Scale From This Drawing

ACET550 Hinge Fitting & Position

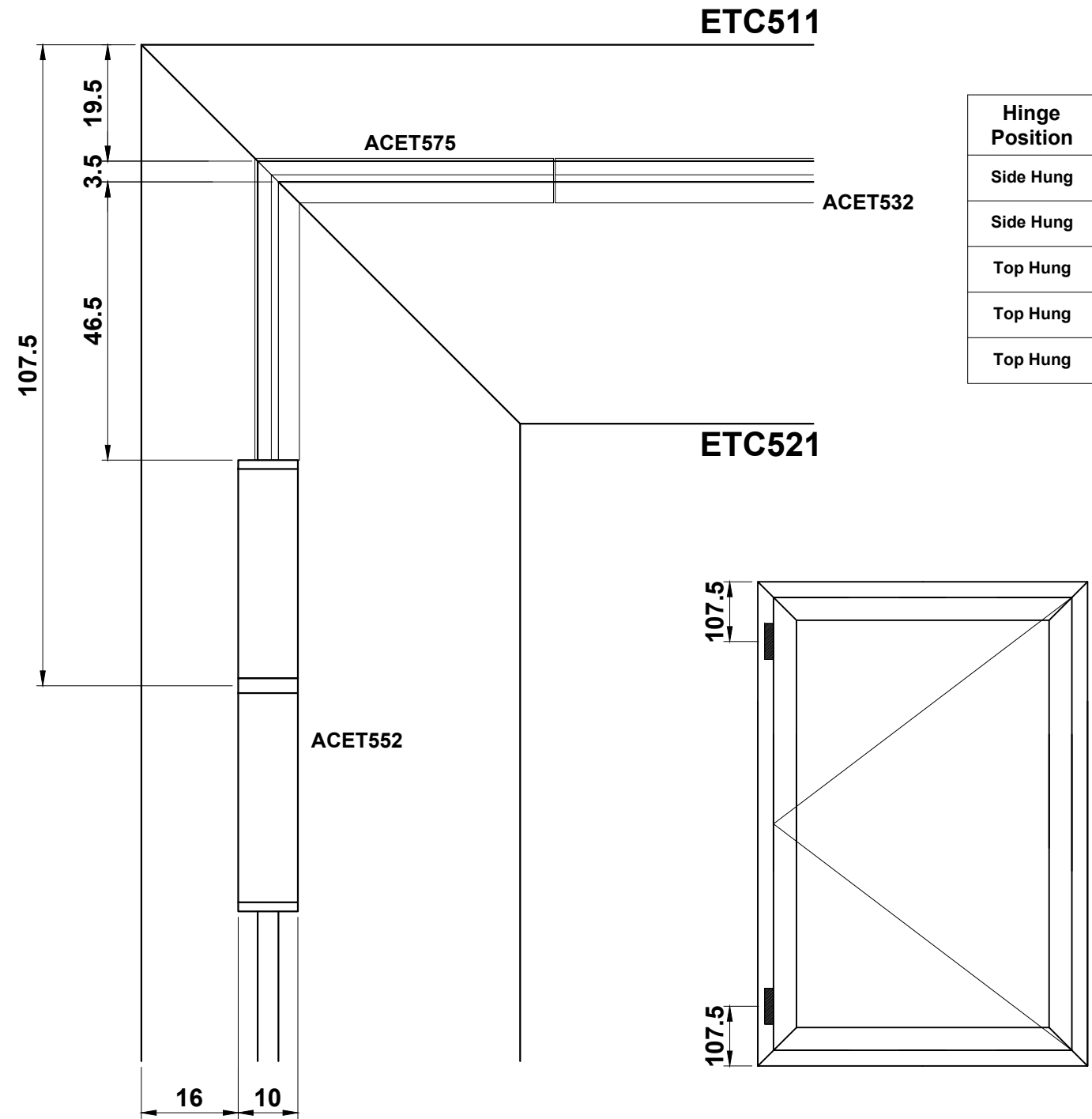


Hinge Position	Size Range	Number of Hinges
Side Hung	≤ 800mm	2
Side Hung	801mm ≤ 1400mm	3
Top Hung	≤ 800mm	2
Top Hung	801mm ≤ 1200mm	3
Top Hung	1201mm ≤ 1400mm	4

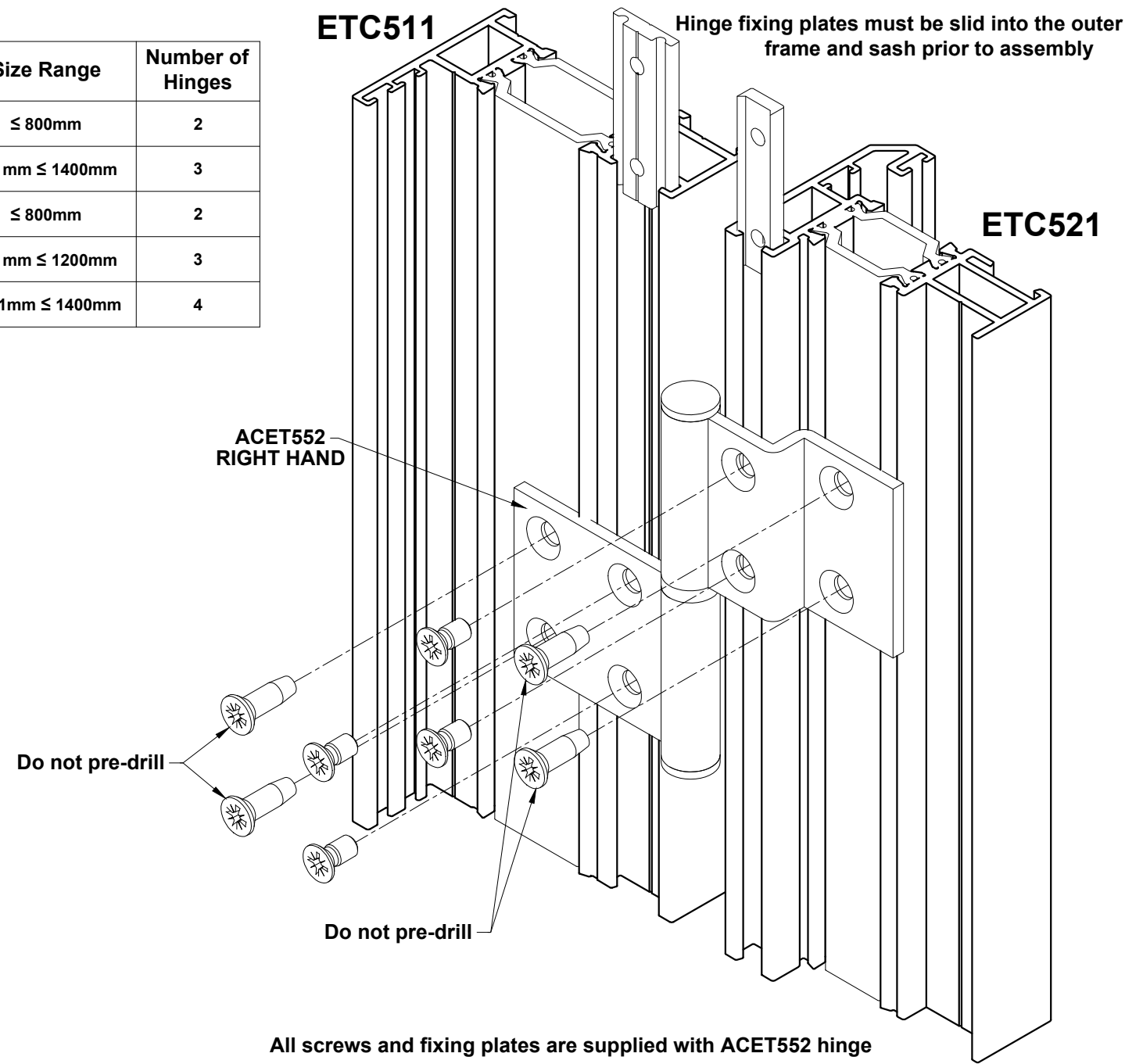


Note: ACET550 Hinge is not currently covered by Kitemark

ACET552 Hinge Fitting & Position



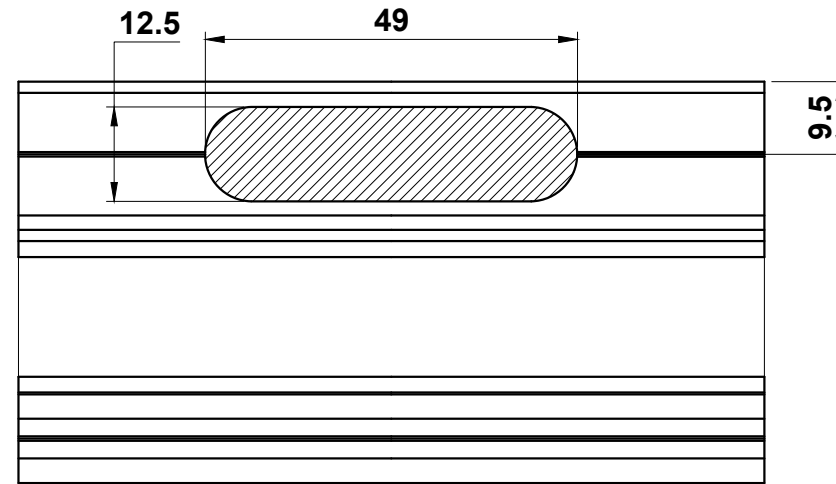
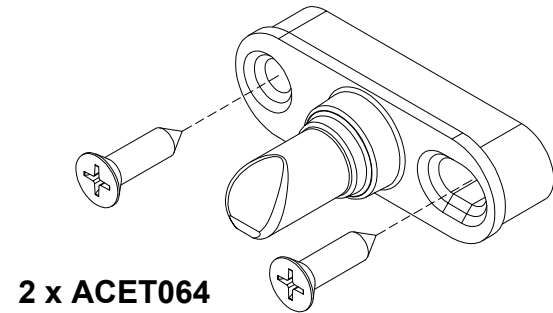
Hinge Position	Size Range	Number of Hinges
Side Hung	≤ 800mm	2
Side Hung	801mm ≤ 1400mm	3
Top Hung	≤ 800mm	2
Top Hung	801mm ≤ 1200mm	3
Top Hung	1201mm ≤ 1400mm	4



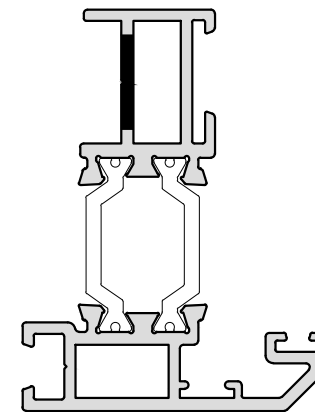
Do Not Scale From This Drawing

ACET553 Hinge Protection Bolt Preparation & Position

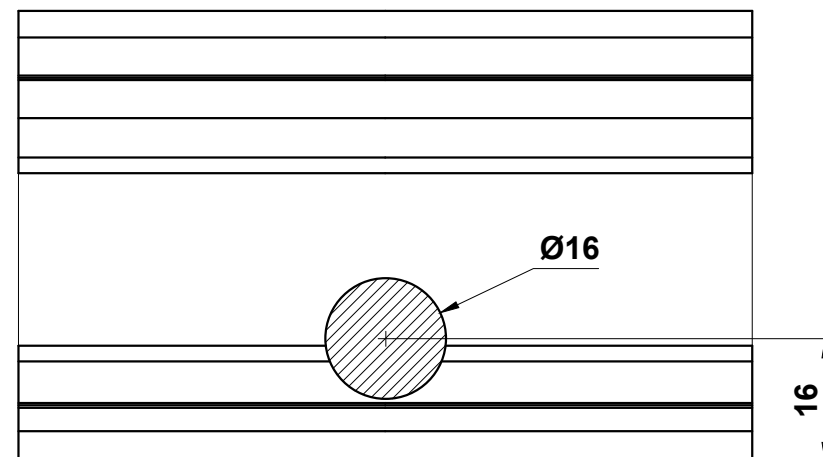
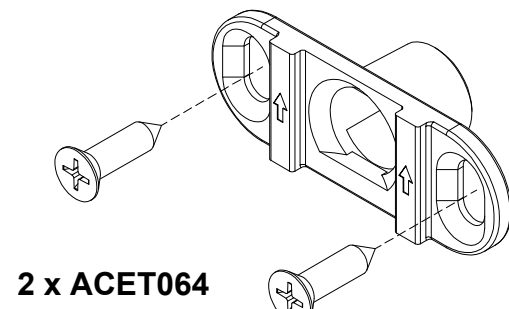
ACET553
Fitted to Sash



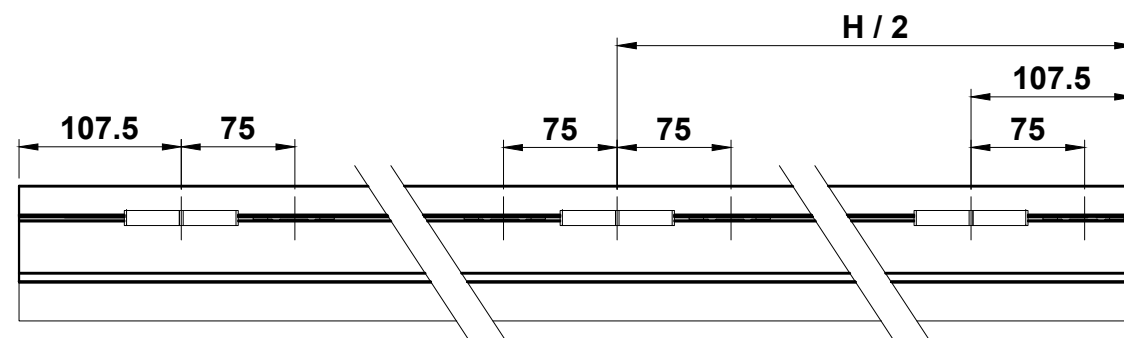
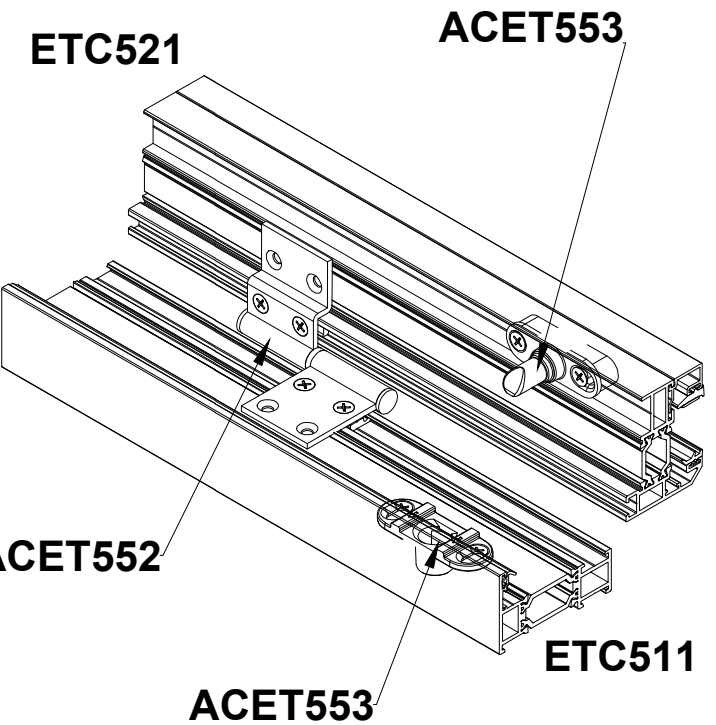
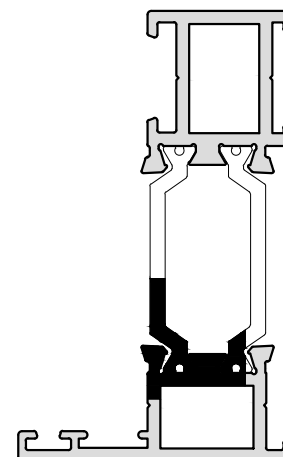
ETC521



ACET553
Fitted to Outerframe



ETC511



ACET553 Positions

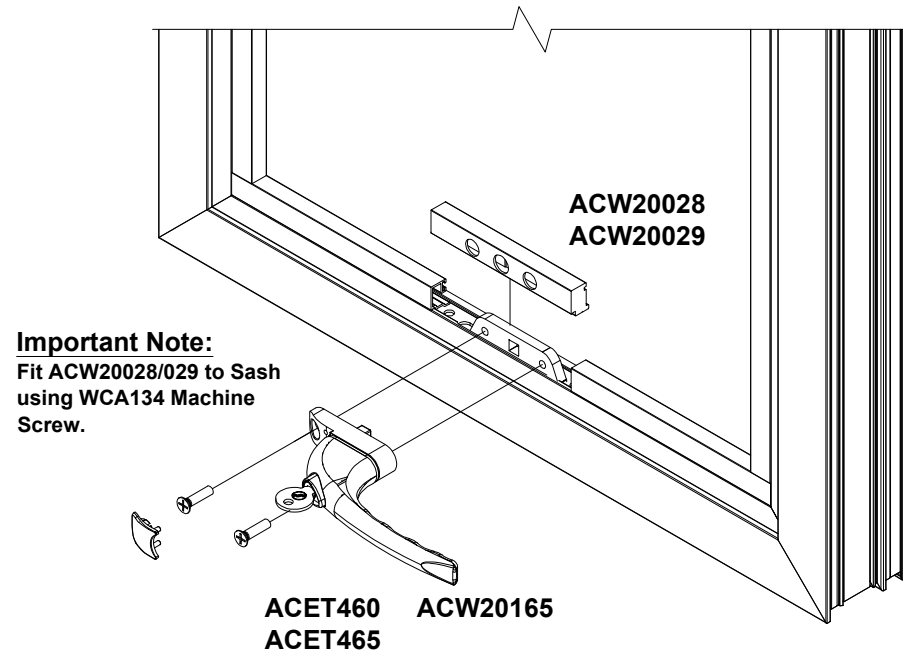
- Top Bolt - 75mm Below Top Hinge
- Middle Bolt (if required) - 75mm Above or 75mm Below Middle Hinge
- Bottom Bolt - 75mm Below Bottom Hinge

ACET553 not required for PAS24:2016

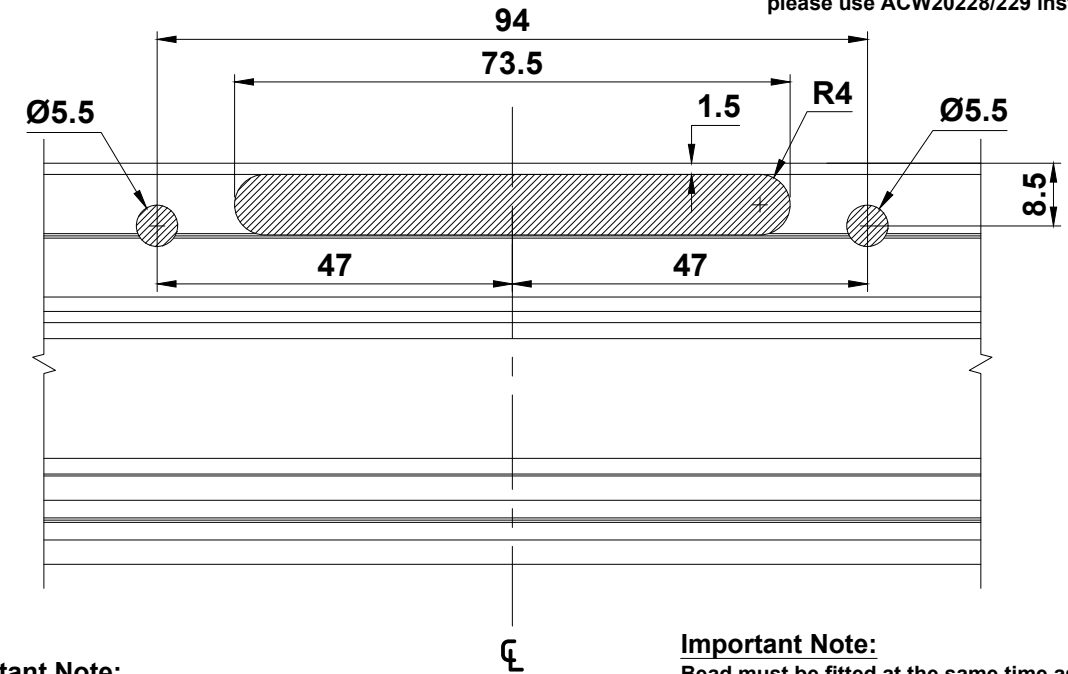
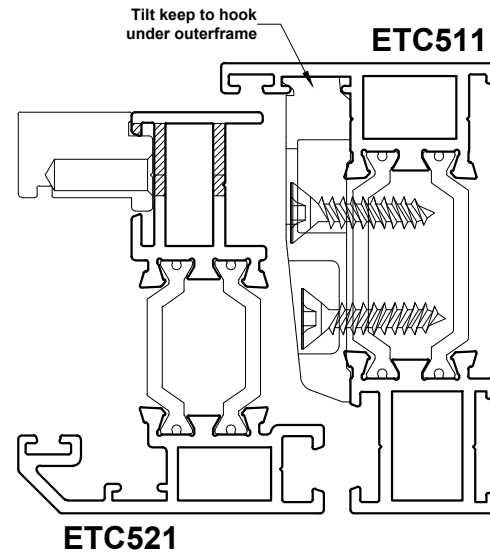
Do Not Scale From This Drawing

Espag Locking Details Using Handle Fixing Blocks

ACW20028/029 Assembly



Sash Preparation for ACW20028/029 & ACET501-505

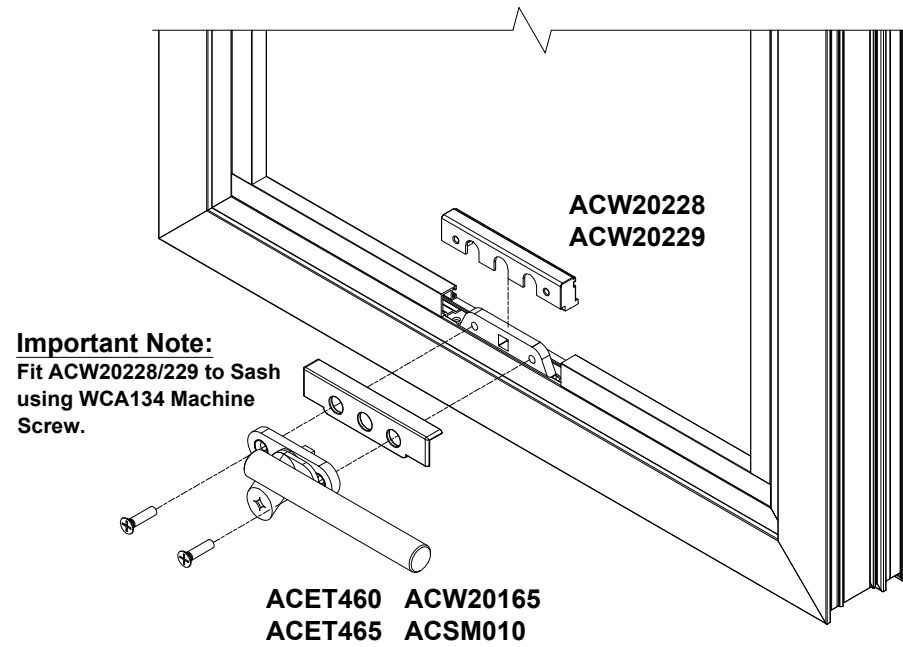


Please Note:
ACW20028/029 are not compatible with ACW20100 & ACW20101 Handles please use ACW20228/229 instead.

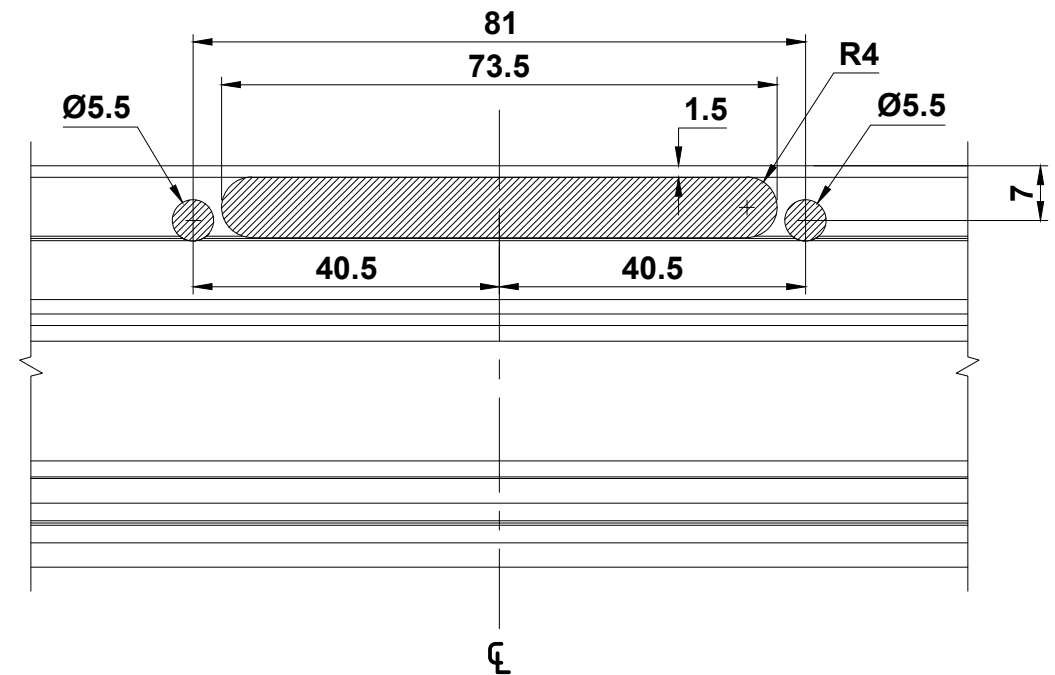
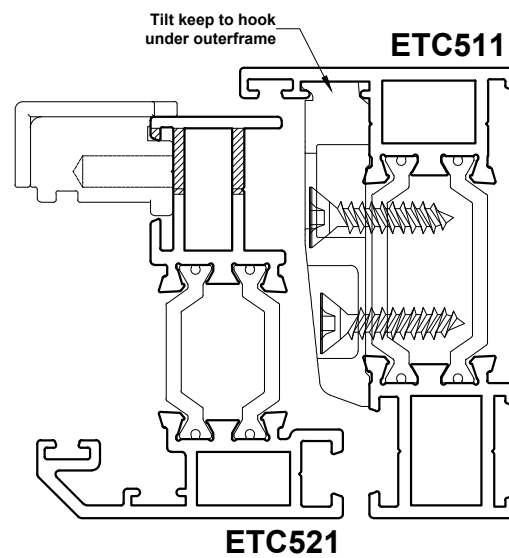
Important Note:
When using ACW20100 & ACW20101 please drill central hole of ACW20228/229 to Ø11mm

Important Note:
Bead must be fitted at the same time as the fixed component of Handle fixing block. Cover component can be fitted after bead with handle.

ACW20228/229 Assembly



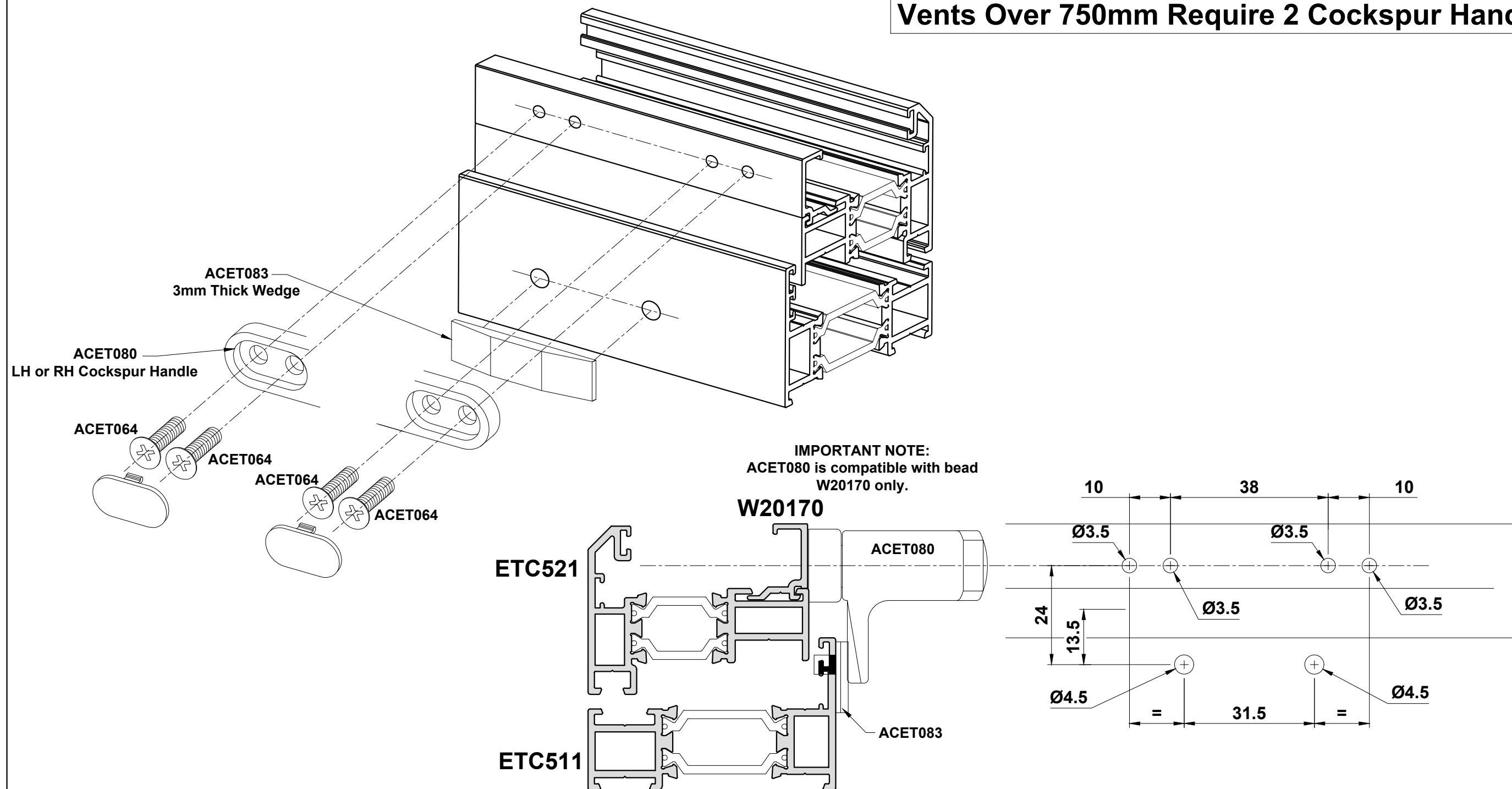
Sash Preparation for ACW20228/229 & ACET501-505



Do Not Scale From This Drawing

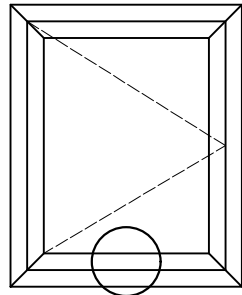
Cockspur Handle Preparation

Vents Over 750mm Require 2 Cockspur Handles

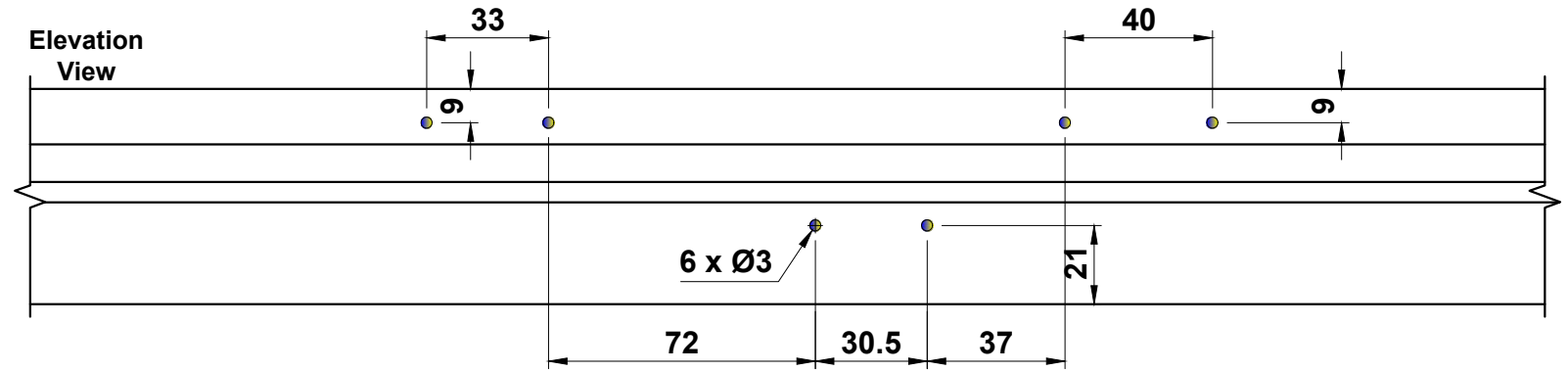


Do Not Scale From This Drawing

ACW20102-ACW20107 Peg Stay Fixing Details



Typical layout for 10" peg stay

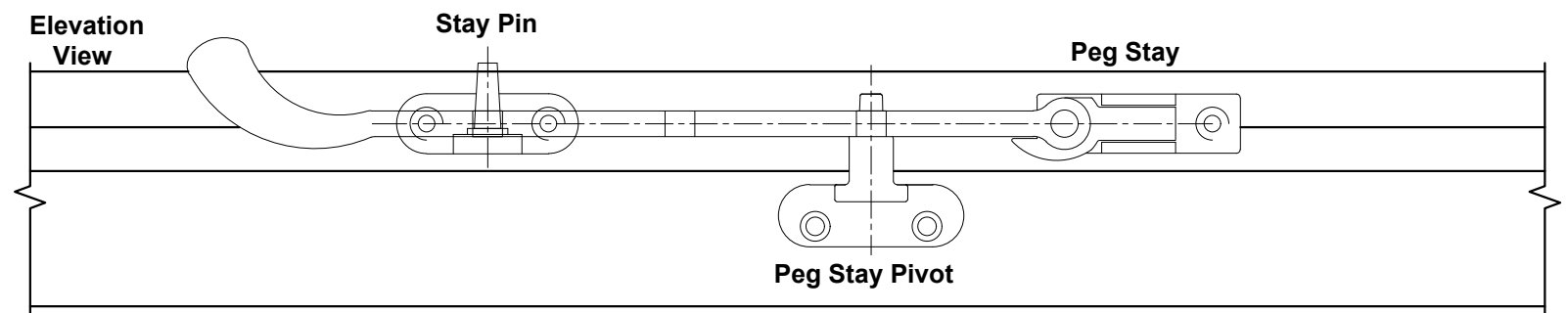
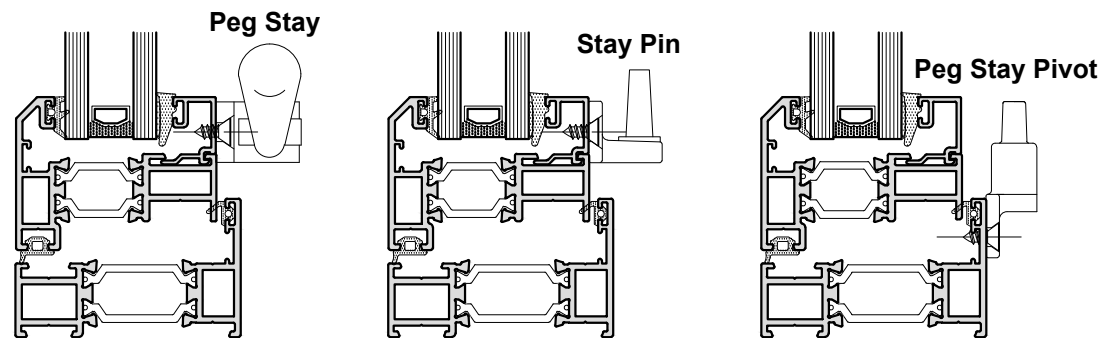
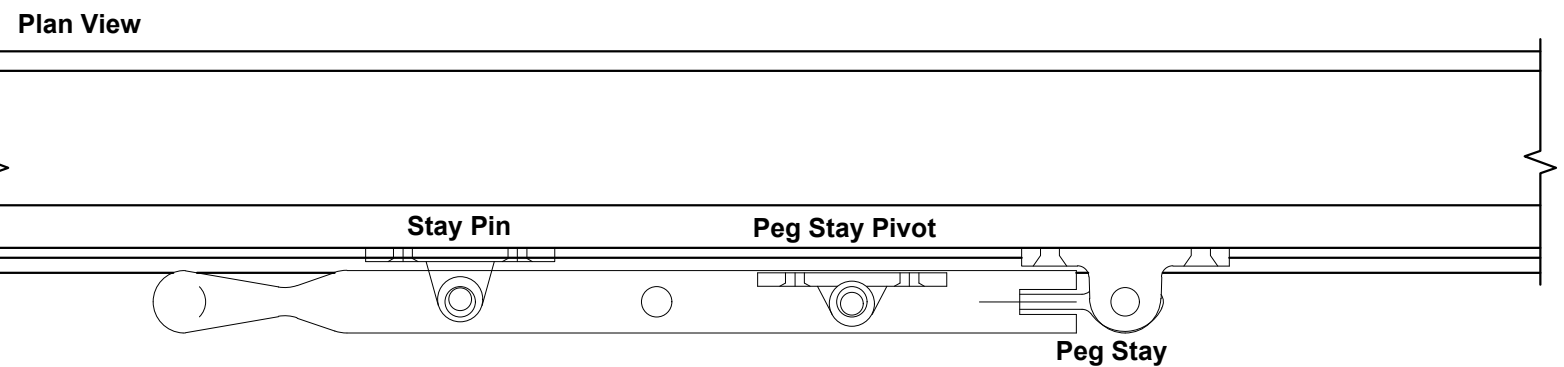


Please use the above dimensions for guidance only.
As each peg stay is hand made, the dimensions will vary slightly.



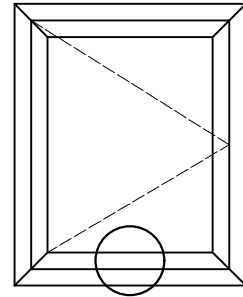
**Monkey Tail
Peg Stay**
ACW20102 = 8 inch
ACW20103 = 10 inch
ACW20104 = 12 inch

**Bulb End
Peg Stay**
ACW20105 = 8 inch
ACW20106 = 10 inch
ACW20107 = 12 inch

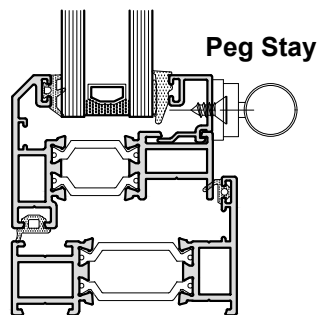


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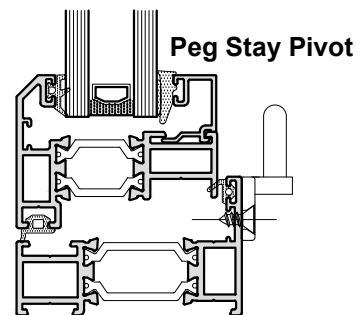
ACW20108 Peg Stay Fixing Details



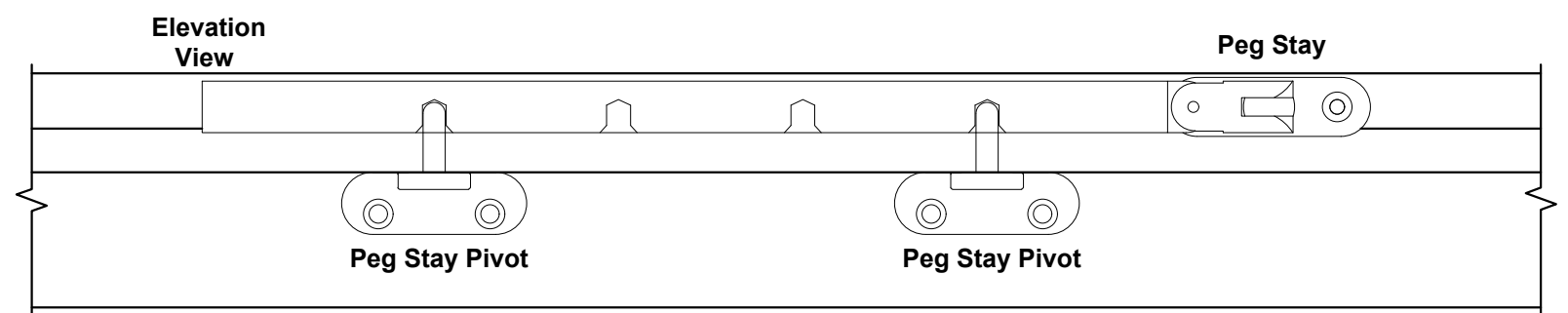
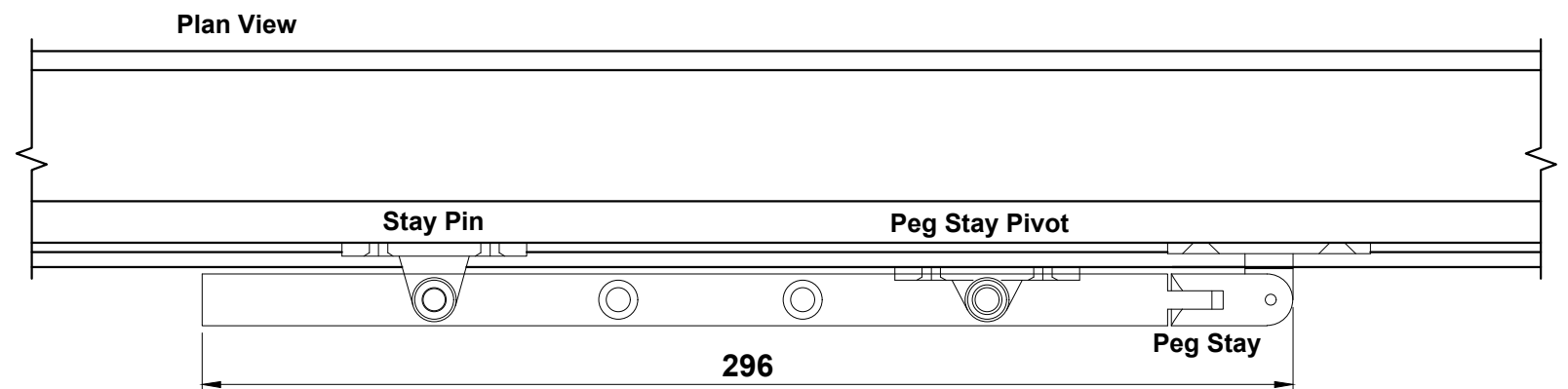
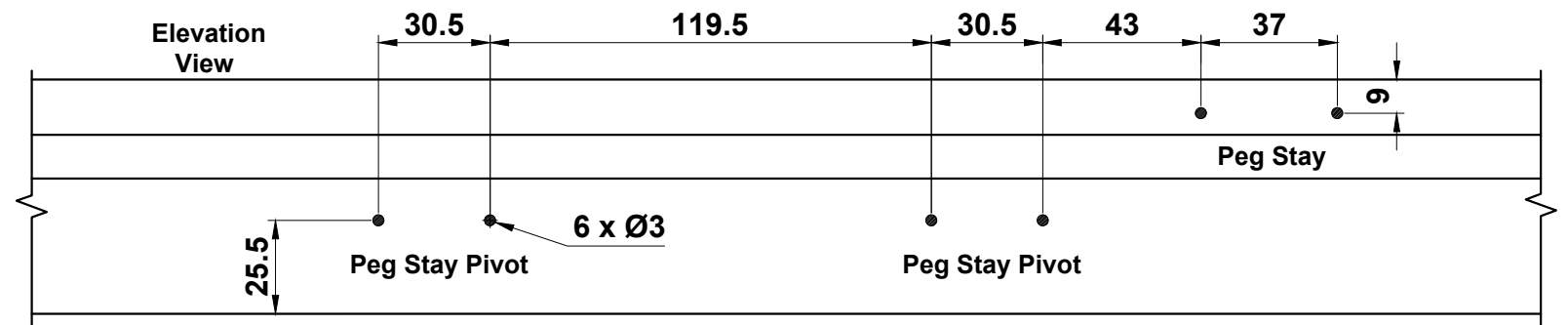
ACW20108



Peg Stay

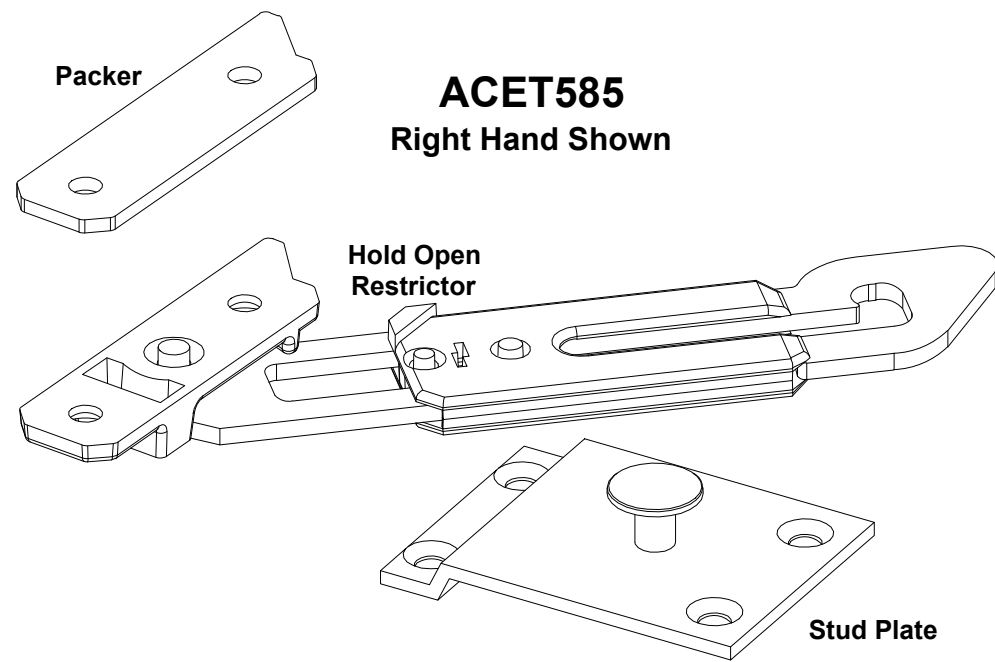
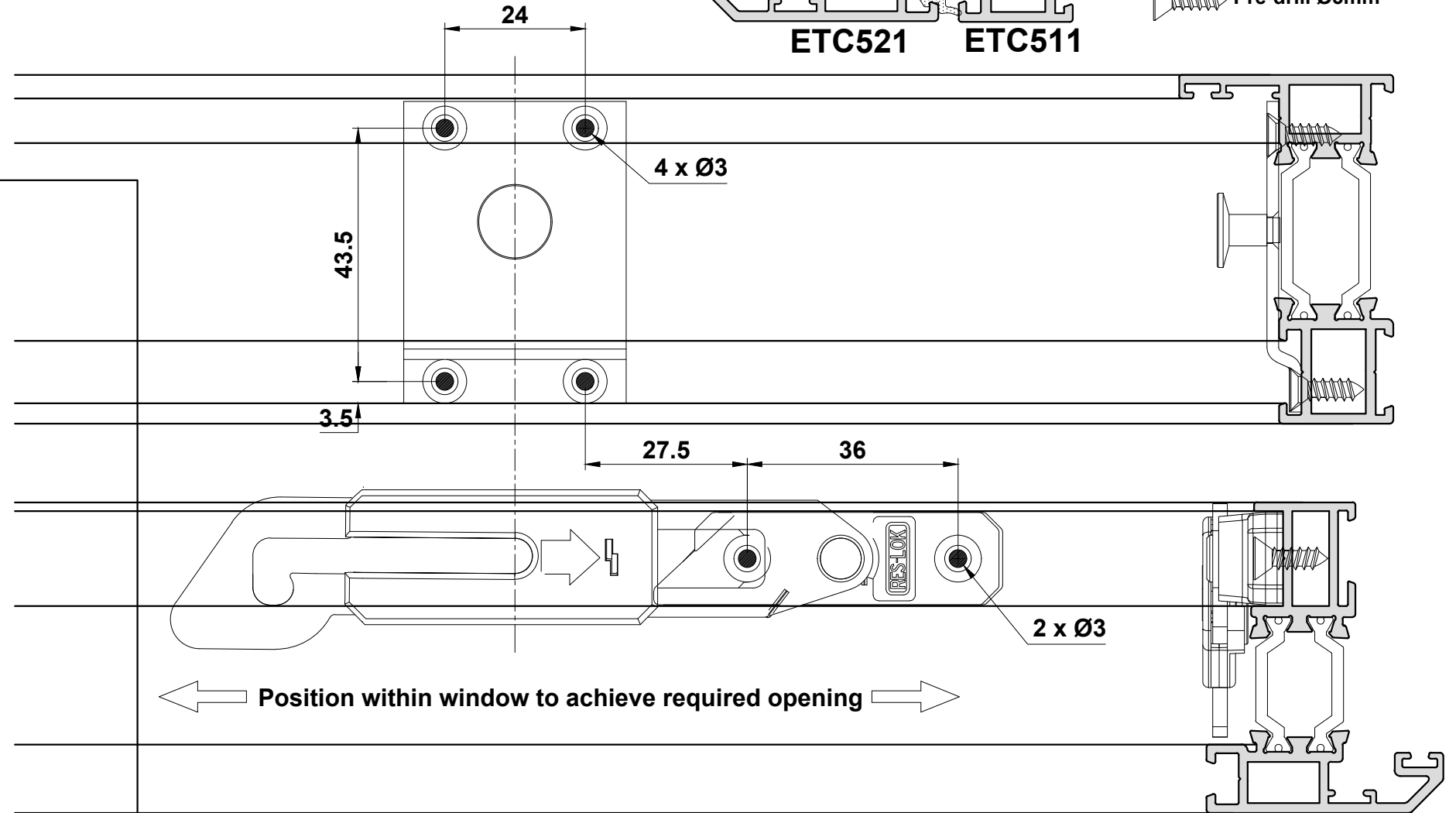
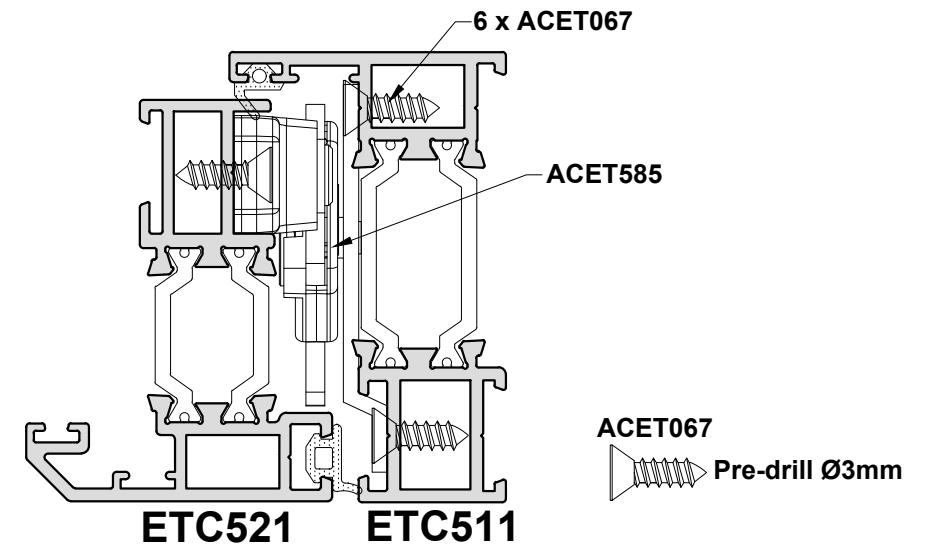
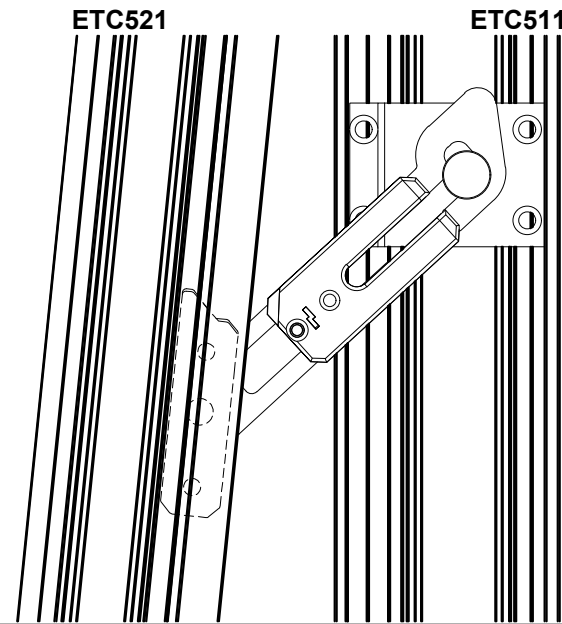


Peg Stay Pivot



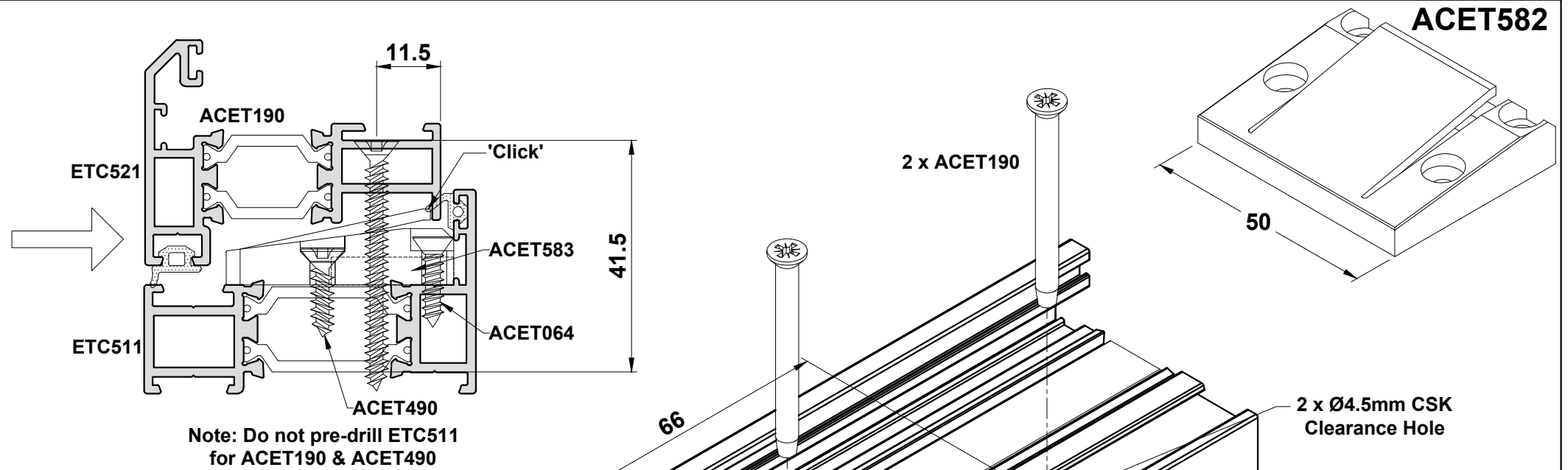
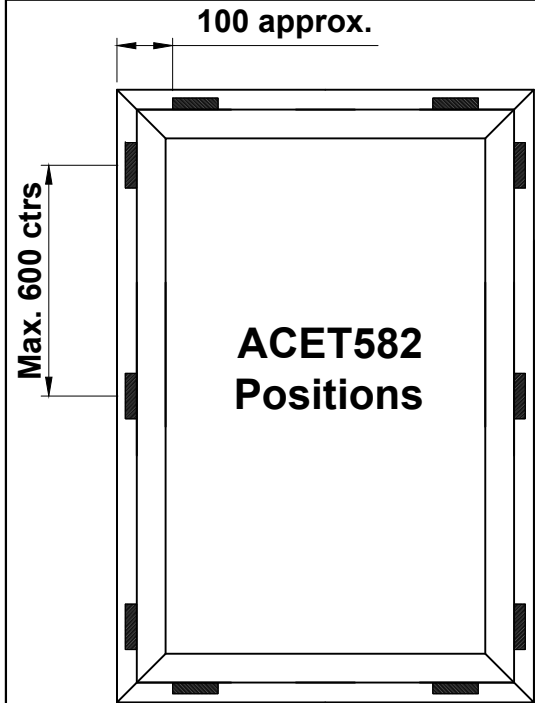
Do Not Scale From This Drawing

ACET585 Hold Open Restrictor

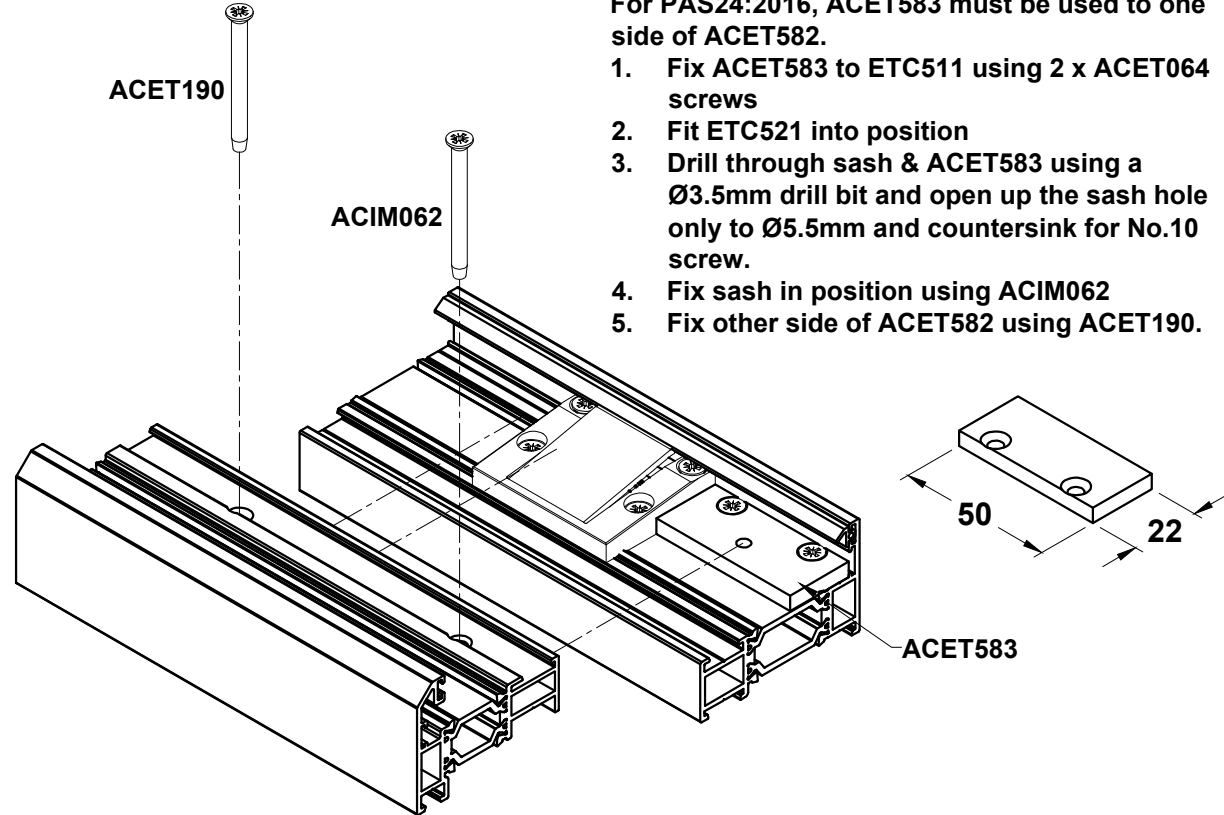


Do Not Scale From This Drawing

Dummy Sash Installation

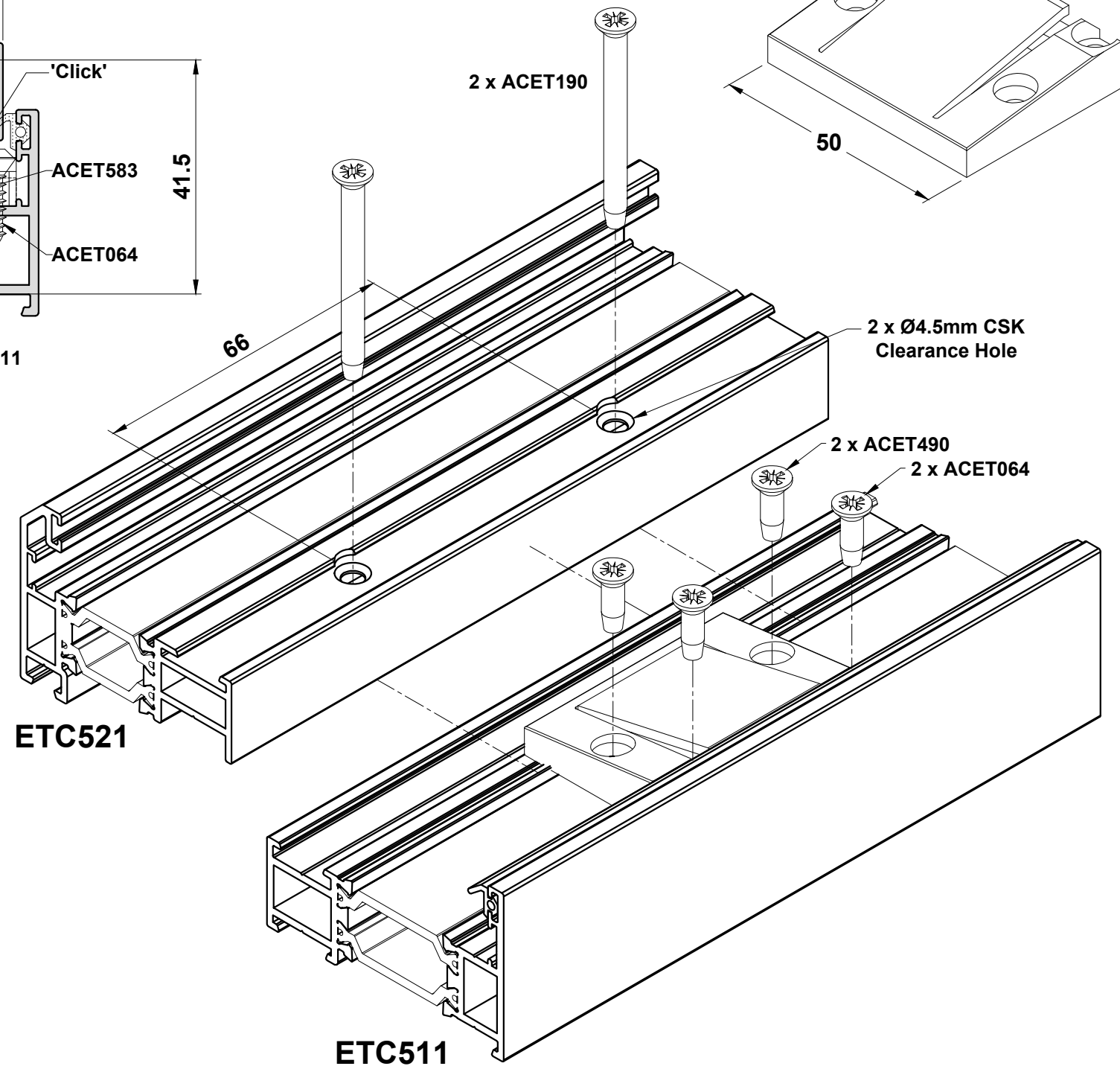


PAS24:2016 Detail



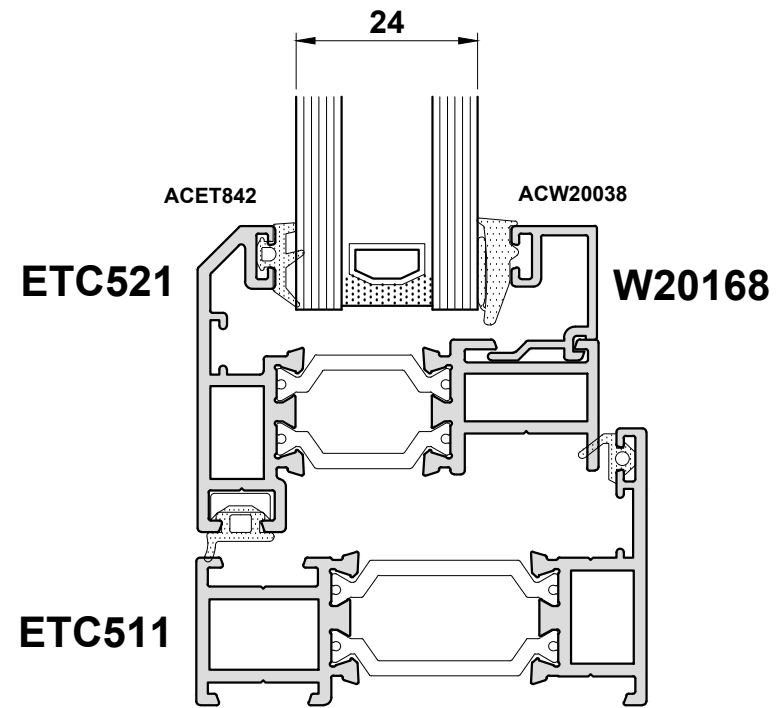
For PAS24:2016, ACET583 must be used to one side of ACET582.

1. Fix ACET583 to ETC511 using 2 x ACET064 screws
2. Fit ETC521 into position
3. Drill through sash & ACET583 using a Ø3.5mm drill bit and open up the sash hole only to Ø5.5mm and countersink for No.10 screw.
4. Fix sash in position using ACIM062
5. Fix other side of ACET582 using ACET190.

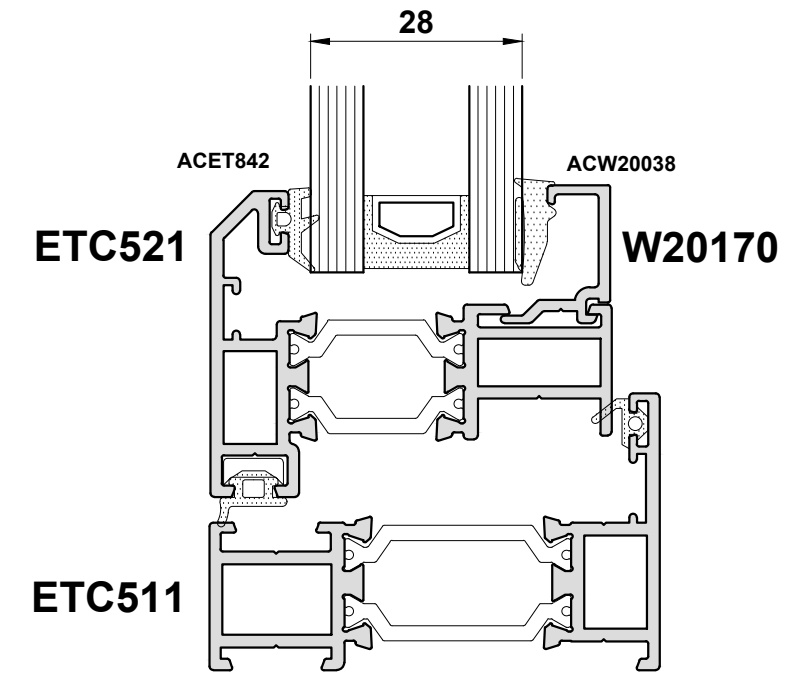


Do Not Scale From This Drawing

**24mm Glazing
Internally Glazed**



**28mm Glazing
Internally Glazed**

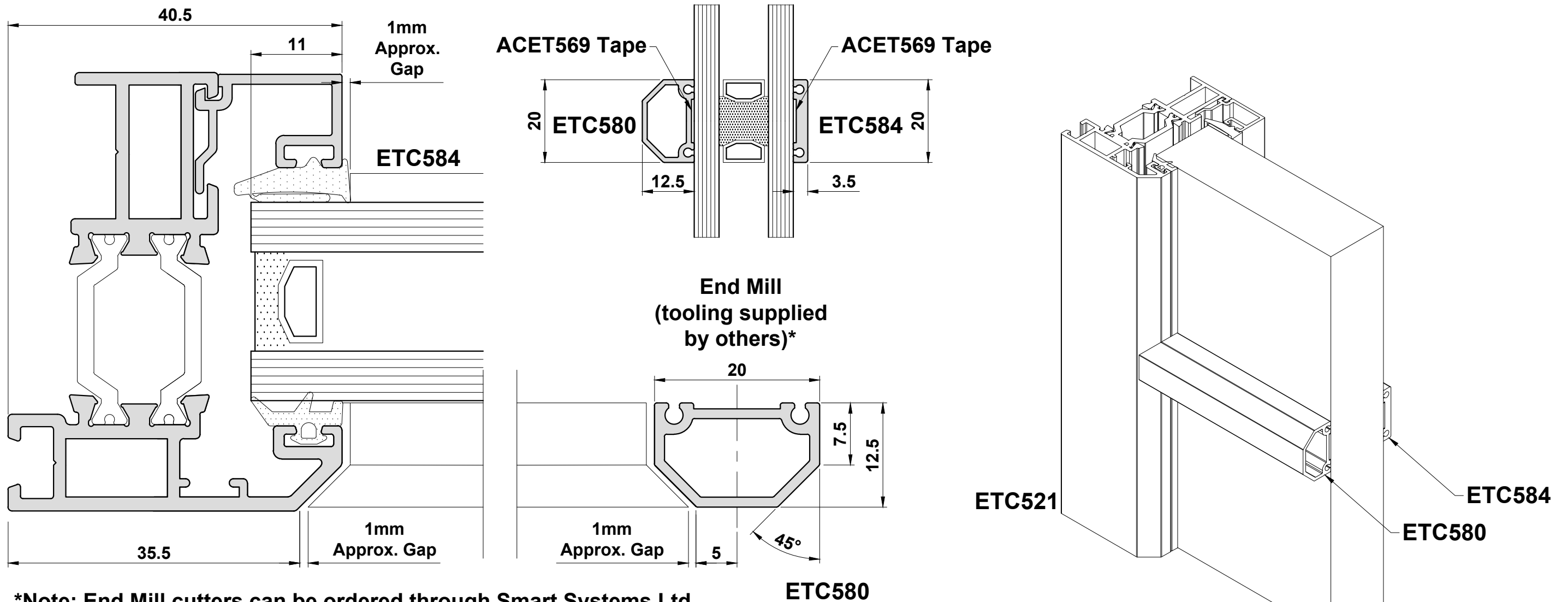


Do Not Scale From This Drawing

Astragal Bar Detail

Application Guide:

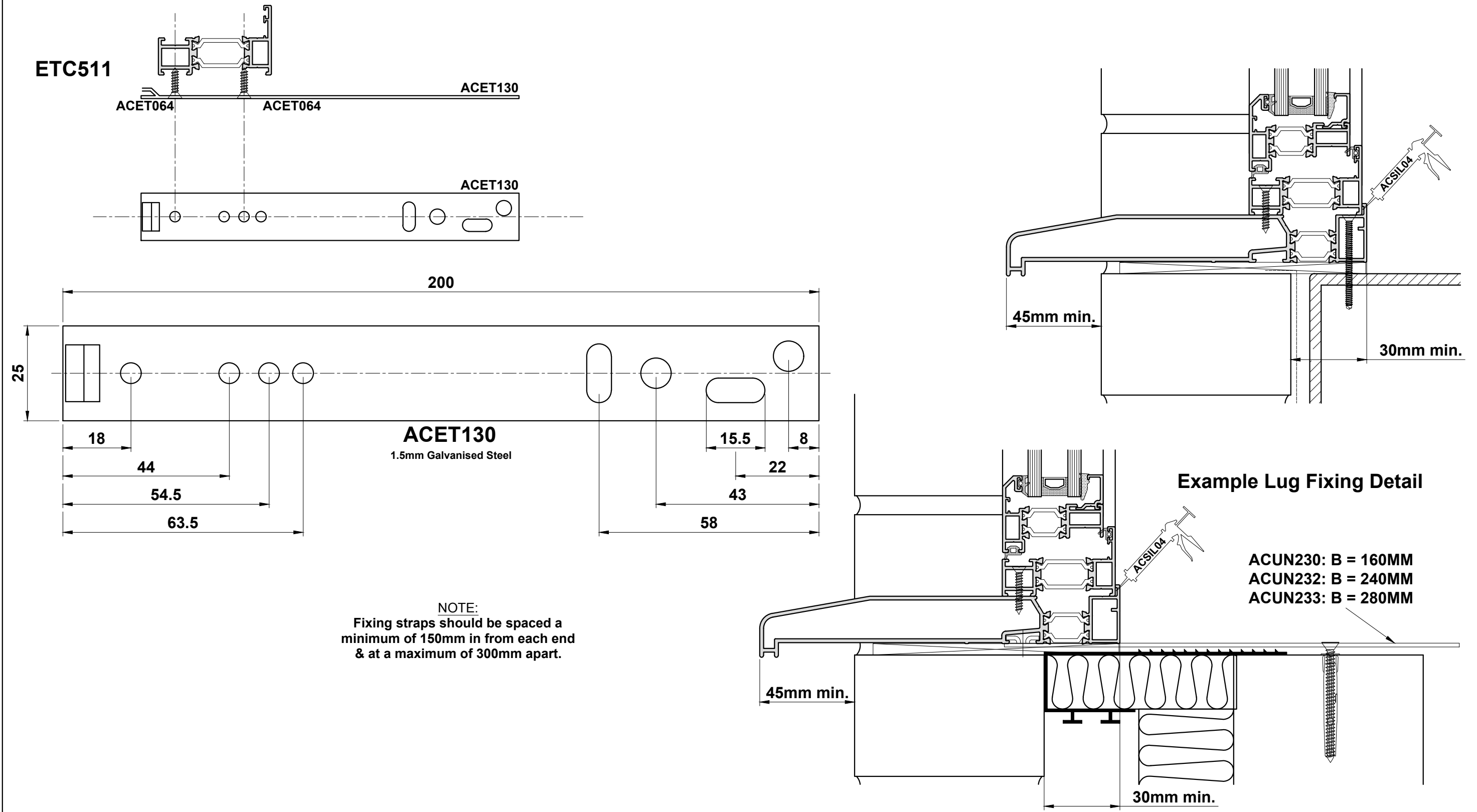
1. Cut the bars allowing approximately 1mm gap each side to allow for expansion
3. Ensure the surfaces are clean and dry
4. Clean the surfaces with a clean cloth & suitable solvents like alcohol or ethers
5. Apply ACET569 tape to the bars and then apply to the glass using sufficient firm pressure to ensure an adequate bond.



***Note:** End Mill cutters can be ordered through Smart Systems Ltd. Please contact the technical department for an order form. Standard delivery is 2-3 weeks approx.

Do Not Scale From This Drawing

Fixing Strap Details



Do Not Scale From This Drawing

Section F

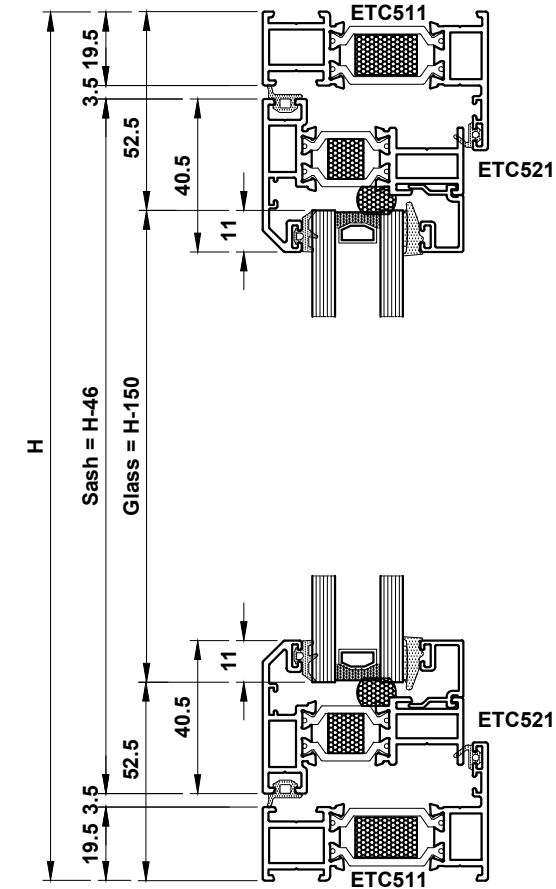
Sawing Tables

Open Out - Cutting Information

Section F

Cutting Information

PART DESCRIPTIONS		TYPICAL STYLES						
OUTER FRAME	HEAD & CILL	W	W	W	W	W	W	W
	JAMBS	H	H	H	H	H	H	H
	TRANSOM(S)		W - 39	W - 39		OF to $\mathcal{C}M$ - 27.5		
	MULLION(S)				H - 39	H - 39	H - 39	
VENT (1)	HORIZONTAL COMPONENTS	W - 46	W - 46	W - 46	OF to $\mathcal{C}M$ - 34.5	OF to $\mathcal{C}M$ - 34.5	OF to $\mathcal{C}M$ - 34.5	W - 46
	VERTICAL COMPONENTS	H - 46	OF to $\mathcal{C}T$ - 34.5	$\mathcal{C}T$ to $\mathcal{C}T$ - 22.5	H - 46	H - 46	H - 46	H - 46
VENT (2)	HORIZONTAL COMPONENTS		W - 46		OF to $\mathcal{C}M$ - 34.5	$\mathcal{C}M$ to $\mathcal{C}M$ - 22.5		
	VERTICAL COMPONENTS		OF to $\mathcal{C}T$ - 34.5		OF to $\mathcal{C}T$ - 34.5	H - 46		
VENT (1)	GLASS WIDTH	W - 105	W - 105	W - 105	OF to $\mathcal{C}M$ - 93.5	OF to $\mathcal{C}M$ - 93.5	OF to $\mathcal{C}M$ - 93.5	W - 105
	GLASS HEIGHT	H - 105	OF to $\mathcal{C}T$ - 93.5	$\mathcal{C}T$ to $\mathcal{C}T$ - 81.5	H - 105	H - 105	H - 105	H - 105
VENT (2)	GLASS WIDTH		W - 105	W - 105	OF to $\mathcal{C}M$ - 93.5	LM to $\mathcal{C}M$ - 81		
	GLASS HEIGHT		OF to $\mathcal{C}T$ - 93.5	OF to $\mathcal{C}T$ - 93.5	OF to $\mathcal{C}T$ - 93.5	H - 105		



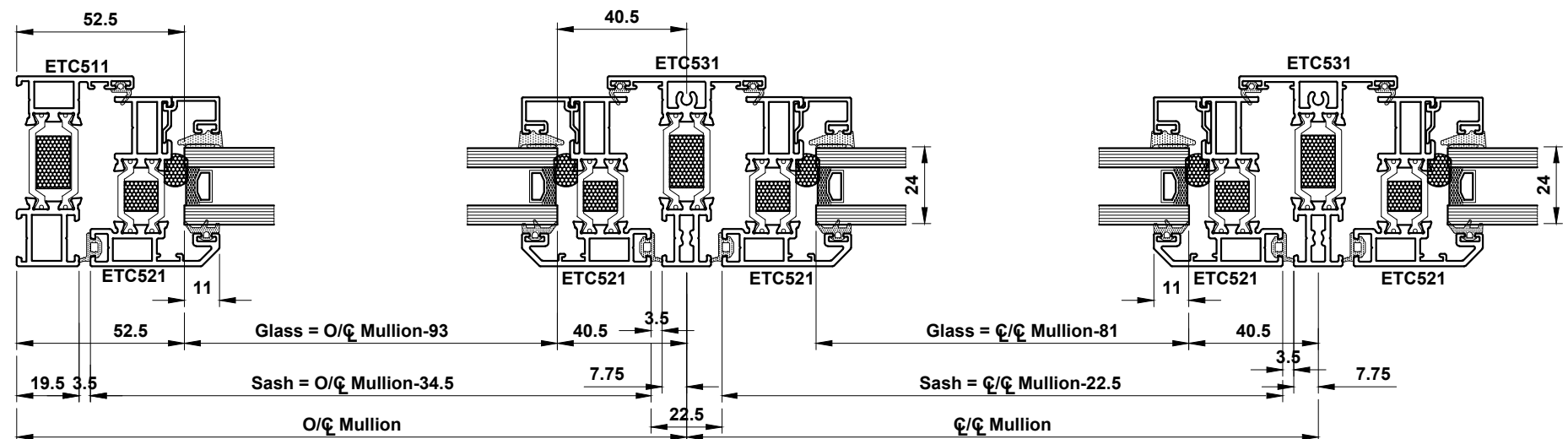
Please Note: Dummy Vent must be used for Fixed Light applications (see Page E17)

LEGEND:

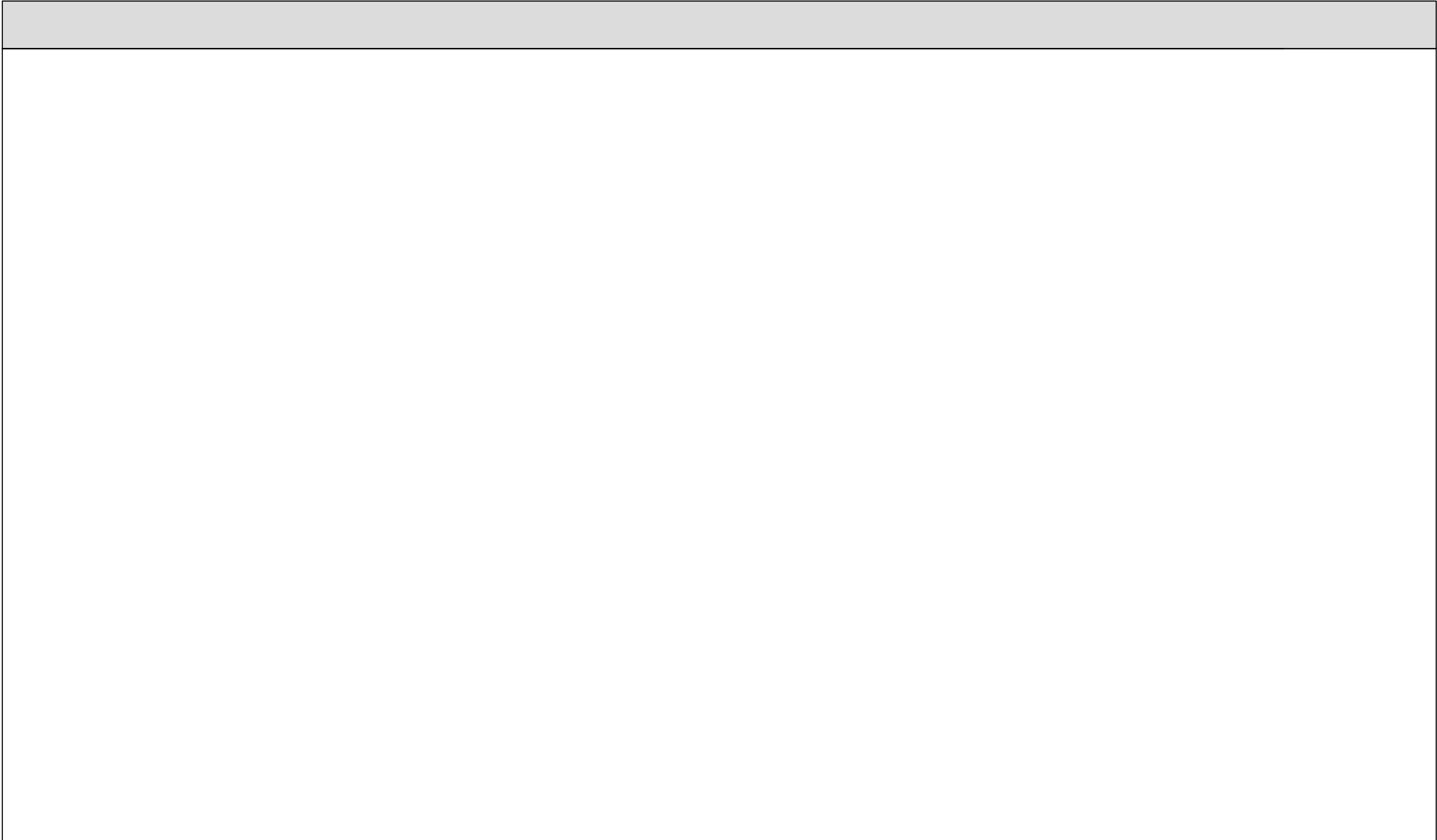
- W = Overall window outer frame width - outside
- H = Overall window outer frame height - outside
- \mathcal{C} = Centre line of transom/mullion
- O/F = Extreme edge of outer frame

Sections:

Outerframe:	ETC511
Sash:	ETC521
Transom/Mullion:	ETC531



Do Not Scale From This Drawing



Do Not Scale From This Drawing