

Main Index

ETC Index	Index & Updates.....	A01 - A02
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A ETC	Profiles	
	Specification Pages.....	A03 - A06
	Technical Information.....	A07 - A12
	Scale Profile Drawings.....	A13 - A34

B ETC	Accessories	
	Photos & Drawings.....	B03 - B36

C ETC	Sections	
	Scale Elevations.....	C03 - C48

D ETC	Statics.....	D01 - D02
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E ETC	Construction Drawings	
	Corner Joint Details.....	E03 - E05
	ACET963R & ACET4950 Punch Tools.....	E06
	Variable angle Cleats.....	E07
	Bead Notching ACVD916.....	E08
	Drainage.....	E09 - E11
	Angled Sub Cill.....	E12
	Transom/Mullion Fixing Details.....	E13 - E18
	ETC4132 & ETC4133 Dummy Transoms.....	E19
	Friction Hinge Details.....	E20 - E22
	ACET4050 Hinge Details.....	E23
	Locking Details.....	E24 - E26
	French Casement Assembly.....	E27 - E28
	Glazing Details.....	E29 - E37
	Bay Pole Options.....	E38 - E43
	Horizontal Coupler Details.....	E44
	Fixing Strap Details.....	E45
	Trickle Vent Details.....	E46

F ETC	Sawing Tables.....	F03 - F11
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Updates

DATE	PAGE	DESCRIPTION
Nov. 2023	All	ACET842 changed to ACET841 when using UN3160G ETC4124 slim sash added ACET963 details added Bay pole, frame extension & coupler details updated/expanded ACET4050 hinge added
Jun. 2024	All	ETC4125 slim heritage sash & ETC4137 heritage transom/mullion added 'G' Profile options added to various sections with additional tooling UN3570 Trickle vent added
Aug. 2024	All	ETC4110, ETC4112 & ETC4120 Cleat chambers revised to accept ACET820 cleat.
Oct. 2024	All	Section B & E Crimping tools for 'G' profiles updated & glazing pages in Section E updated.
Jun. 2025	All	ETC4101, 4105, 4132, 4133, 4137, PCX55, UN3080, 3081, 3082, 3083 & 3270 sections added. ACET963 updated to ACET963R. ACET4950 punch tool added.

Specification

GENERAL DESCRIPTION

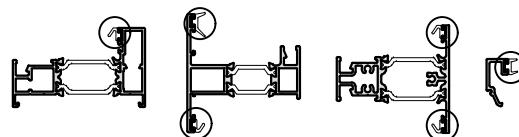
The "Alitherm 400" window system described in this manual is suitable for both replacement windows for existing buildings and for installation into new buildings.

The system incorporates internally & externally beaded vent frames suitable for espag locking.

The low line gaskets and extended polyamide thermal breaks help to provide excellent U Values and Window Energy Rating capable of achieving an 'A' Rating when used in conjunction with the correct double glazed unit.

Alitherm 400 has the option of Quick-Glaze beads with integrated gasket, providing a fast and efficient glazing process. Non integrated gasket options are also available.

Profiles with a 'G' suffix are supplied with integrated gasket.



PROFILE SPECIFICATION

The window frames are constructed of aluminium alloy extrusion to BS EN 755-9 and BS EN 12020, extruded to 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:-

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

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 400 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 silicone seal.

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.

Specification

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 gap sealer. After fixing, special care should be taken to ensure any excess is cleared from painted surfaces.

PROFILES WITH INTEGRATED GASKET

When cutting profiles with integrated gaskets, it is crucial to use sharp, well-maintained saw blades to ensure clean cuts.

For optimal mitre cuts, position the profiles so the gasket channels face the saw blades. However, we recommend testing different profile orientations on your saw to determine the best cutting method.

Transoms and mullions with integrated gaskets can be end milled as standard.

Specification

MULTI-POINT LOCKING

The vent should be prepped for the locking mechanism prior to fabrication and fitted into vent before hanging. Stainless steel fixings shall be used for securing the locking mechanism and keeps in position.

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.

EXTERNALLY 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 squared 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.

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.

When glazing with the Quick-Glaze bead, using a glass adjuster is strongly advised to adjust the glazing accordingly with ease.

Specification

Kitemark™ Certificate

No. KM 81580

Size Limitations and Performance Characteristics

Alitherm 400 Aluminium Alloy Window System

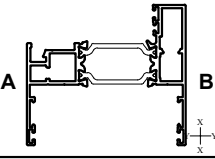
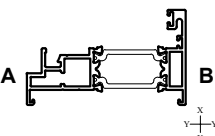
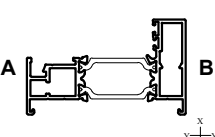
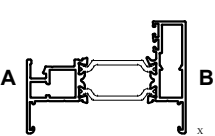
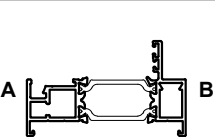
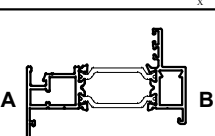
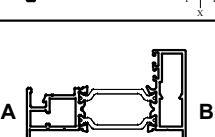
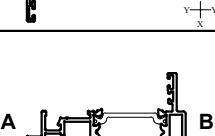
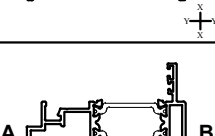
Window Type	Width (mm) Maximum	Height (mm) Maximum	Weight (kg) Maximum	Area (M²) Maximum	Friction Stays (up to and including)	Transom/Mullion Length (mm) inc frame - Maximum	Air Permeability classification	Water tightness classification	Resistance to Wind classification	Exposure category as given in Table 1 of BS 6375-1:2009
Sash dimensions for windows with approved sash profiles:										
Projecting top hung Internally beaded	1400	1400	40	-	24"	-	4	7A	AE2400	2000+
Projecting top hung Externally beaded	1400	1400	40	-	24"	-	4	5A	AE2400	2000+
Projecting side hung Internally beaded	600	1400	28	-	16"	-	4	7A	AE2400	2000+
Projecting side hung Externally beaded	600	1400	28	-	16"	-	4	5A	AE2400	2000+
Overall dimensions for windows with approved outer frame profiles:										
Fixed Internally Beaded	2100	2100	-	4.2	-	-	4	7A	AE2400	2000+
Fixed Externally Beaded	2100	2100	-	4.2	-	-	4	5A	AE2400	2000+
Overall dimensions for approved outer frames & transom/mullion profiles:										
Multilights* Internally Beaded	2100	2100	-	2.5	-	1200	4	7A	AE2400	2000+
Multilights* Externally Beaded	2100	2100	-	2.5	-	1200	4	5A	AE2400	2000+

*Transom/mullion subject to
lxx/lyy requirements

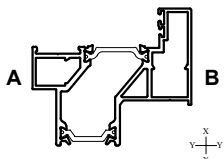
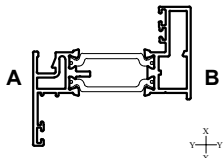
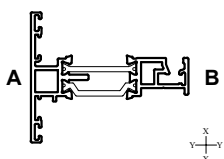
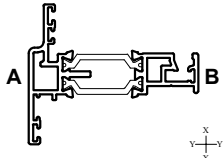
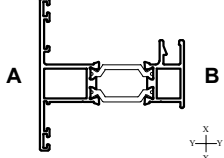
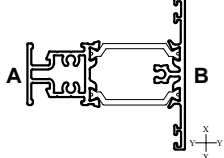
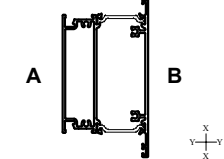
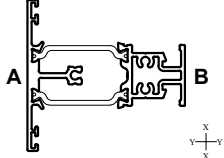
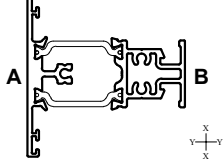
Please see pages B25 & B26 for more
guidance on vent sizes & limitations.

- Side Hung Weight Limit Can Be Increased To 40 kg Using Egress Hinges
- See hardware for minimum and maximum sizes

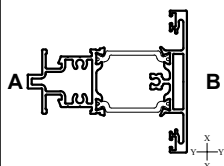
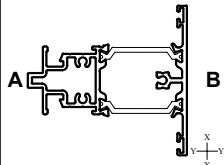
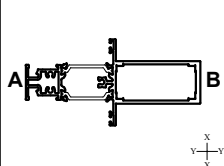
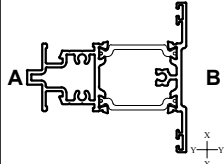
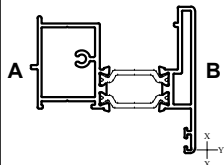
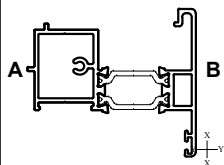
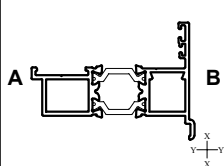
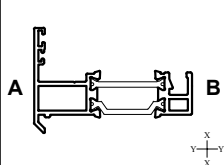
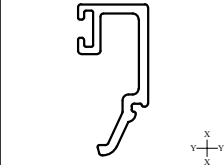
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ETC4101 ETC4101G		A17	426	122	31.86 --- 8.3	9.21 --- 3.3	6.5	1	✓	✓	✓	✓	✓
ETC4105 ETC4105G		A19	333	82	23.88 --- 6.0	3.83 --- 2.16	6.5	1	✓	✓	✓	✓	✓
ETC4110 ETC4110G		A15	295	82	23.98 --- 6.16	4.12 --- 2.23	6.5	1	✓	✓	✓	✓	✓
ETC4111 ETC4111G		A15	346	97	26.73 --- 6.91	5.28 --- 2.14	6.5	1	✓	✓	✓	✓	✓
ETC4112 ETC4112G		A16	297	78	21.54 --- 6.47	2.74 --- 1.64	6.5	1	✓	✓	✓	✓	✓
ETC4113		A16	371	101	27.56 --- 7.8	5.91 --- 2.18	6.5	1	✓	✓	✓	✓	✓
ETC4114		A17	369	101	30.35 --- 8.22	7.60 --- 2.93	6.5	1	✓	✓	✓	✓	✓
ETC4115 ETC4115G		A18	297	78	21.50 --- 5.69	2.75 --- 1.68	6.5	1	✓	✓	✓	✓	✓
ETC4116 ETC4116G		A18	351	96	26.38 --- 6.61	4.39 --- 1.93	6.5	1	✓	✓	✓	✓	✓
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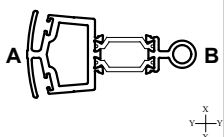
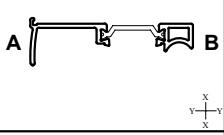
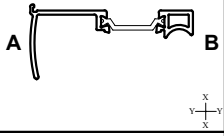
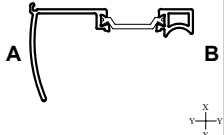
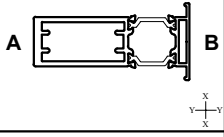
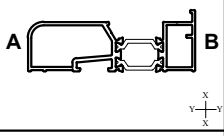
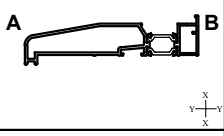
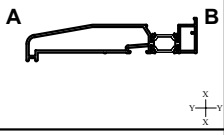
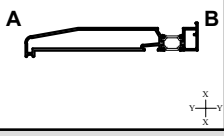
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ETC4120 ETC4120G		A20	297	87	18.24 --- 6.10	4.63 --- 1.95	6.5	1	✓	✓	✓	✓	✓
ETC4124 ETC4124G		A21	346	72	14.37 --- 3.88	2.75 --- 1.13	6.5	1	✓	✓	✓	✓	✓
ETC4125 ETC4125G		A22	344	79	13.93 --- 3.77	2.84 --- 1.18	6.5	1	✓	✓	✓	✓	
ETC4129 ETC4129G		A23	335	99	19.34 --- 5.51	5.91 --- 1.95	6.5	1	✓	✓	✓	✓	✓
ETC4130 ETC4130G		A24	312	89	19.39 --- 5.84	4.66 --- 1.63	6.5	1	✓	✓	✓	✓	✓
ETC4131		A42	427	213	93.65 --- 16.15	43.02 --- 16.42	6.5	1	✓	✓	✓	✓	✓
ETC4132		A21	381	89	19.8 --- 5.88	4.53 --- 1.59	6.5	1	✓	✓	✓	✓	✓
ETC4133		A22	371	89	16.27 --- 5.1	4.6 --- 1.61	6.5	1	✓	✓	✓	✓	✓
								A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

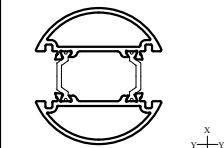
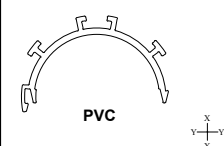
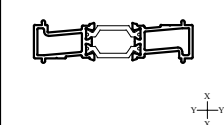
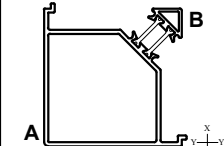
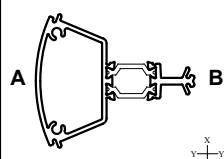
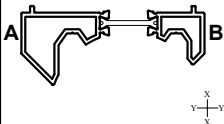
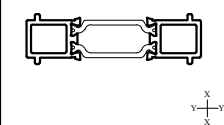
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ETC4135 ETC4135G		A25	337	111	23.74 --- 6.30	6.51 --- 2.11	6.5	1	✓	✓	✓	✓	✓
ETC4136		A24	421	201	95.03 --- 15.97	9.13 --- 3.21	6.5	1	✓	✓	✓	✓	✓
ETC4137 ETC4137G		A25	410	113	23.74 --- 6.30	6.51 --- 2.11	6.5	1	✓	✓	✓	✓	✓
ETC4138		A26	306	83	20.06 --- 5.62	7.04 --- 2.88	6.5	1	✓	✓	✓	✓	✓
ETC4139		A26	340	84	19.48 --- 5.40	6.55 --- 2.54	6.5	1	✓	✓	✓	✓	✓
ETC4146		A27	248	74	12.60 --- 3.50	2.64 --- 1.35	6.5	1	✓	✓	✓	✓	✓
ETC4147		A27	256	65	13.69 --- 3.89	2.00 --- 1.22	6.5	1	✓	✓	✓	✓	✓
ETC4179 ETC4179G		A29	104	29	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
								A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

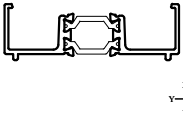
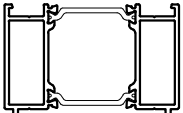
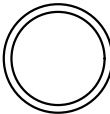
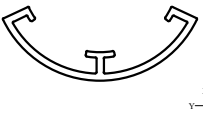
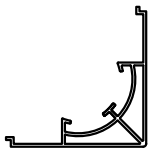
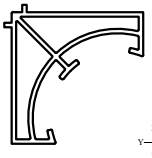
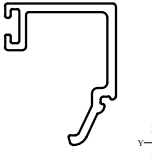
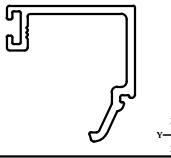
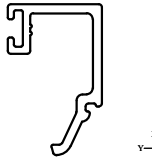
PROFILES : TECHNICAL INFORMATION

Number	Picture	Page	Perim. mm	Mec. mm	lx(cm4) wx(cm3)	ly(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M
ETC080		A35	334	61	25.58 --- 5.47	4.88 --- 2.57	6.5	1	✓	✓	✓	✓	✓
ETC081		A35	197	35	13.85 --- 3.8	0.36 --- 0.52	6.5	1	✓	✓	✓	✓	✓
ETC082		A35	221	47	16.21 --- 4.19	1.15 --- 1.29	6.5	1	✓	✓	✓	✓	✓
ETC083		A35	243	58	17.66 --- 4.32	2.64 --- 2.36	6.5	1	✓	✓	✓	✓	✓
ETC357		A36	297	138	41.5 --- 9.86	52 --- 2.67	6.5	1	✓	✓	✓	✓	✓
ETC451		A37	304	109	32.44 --- 7.29	3.46 --- 2.79	6.5	1	✓	✓	✓	✓	✓
ETC452		A37	414	197	122.46 --- 18.03	6.01 --- 3.34	6.5	1	✓	✓	✓	✓	✓
ETC457		A37	444	212	164.27 --- 21.60	6.79 --- 3.73	6.5	1	✓	✓	✓	✓	✓
ETC458		A38	524	252	313.62 --- 32.63	8.87 --- 4.79	6.5	1	✓	✓	✓	✓	✓
								A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

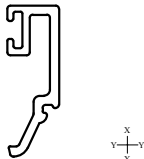
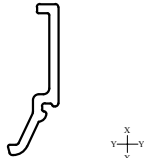
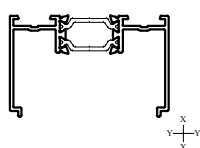
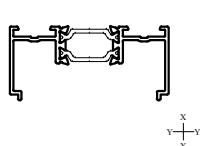
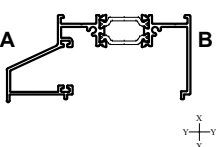
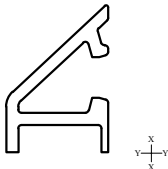
PROFILES : TECHNICAL INFORMATION

Number	Picture	Page	Perim. mm	Mec. mm	lx(cm4) wx(cm3)	ly(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M
ETC477		A39	752	408	1591.6 --- 105.33	26.84 --- 12.84	6.5	1	✓	✓	✓	✓	✓
ETC479N		A38	594	287	501.64 --- 44.04	9.72 --- 5.34	6.5	1	✓	✓	✓	✓	✓
ETC869		A31	332	144	18.38 --- 6.13	14.3 --- 5.17	6.5	1	✓	✓	✓	✓	✓
PCX55		A32	207	-	- --- -	- --- -	3	1	✓				
UN3000		A36	251	41	15.8 --- 4.51	0.79 --- 0.84	6.5	1	✓	✓	✓	✓	✓
UN3010		A34	369	226	41.4 --- 10.7	40.0 --- 11.6	6.5	1	✓	✓	✓	✓	✓
UN3011		A34	288	130.3	22.3 --- 5	12.2 --- 4.1	6.5	1	✓	✓	✓	✓	✓
UN3012		A31	238	76	1.53 --- 0.79	17.24 --- 5.09	6.5	1	✓	✓	✓	✓	✓
UN3015		A36	214.5	56	18.1 --- 5.2	1 --- 1	6.5	1	✓	✓	✓	✓	✓
								A = Outside B = Inside		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	lx(cm4) wx(cm3)	ly(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M
UN3020		A40	281.6	70.4	14.8 --- 4.2	0.9 --- 1	6.5	1	✓	✓	✓	✓	
UN3042		A40	288	111	31.2 --- 8.9	9.5 --- 4.3	6.5	1	✓	✓	✓	✓	✓
UN3080		A32	-	-	4.69 --- 4.69	2.47 --- 2.47	6.5	1	✓				
UN3081		A32	189	68	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
UN3082		A33	379	151	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
UN3083		A33	235	12	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
UN3160 UN3160G		A28	120	39	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
UN3162N UN3162G		A28	128	41	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
UN3164 UN3164G		A29	112	33	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
								A = Outside B = Inside		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	lx(cm4) wx(cm3)	ly(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M
UN3166		A30	98	43	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
UN3168		A30	65	23	- --- -	- --- -	6.5	1	✓	✓	✓	✓	
UN3270		A40	407	85	23.39 --- 6.68	5.8 --- 1.83	6.5	1	✓	✓	✓	✓	
UN3370		A40	360	61	18.4 --- 5.26	2.15 --- 1.97	6.5	1	✓	✓	✓	✓	✓
UN3570		A41	545	140	47.47 --- 9.53	9.26 --- 4.87	6.5	1	✓	✓	✓	✓	✓
VL72		A31	251	41	16.30 --- 4.66	1.12 --- 1.55	6.5	1	✓	✓	✓	✓	
													
													
													
								A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

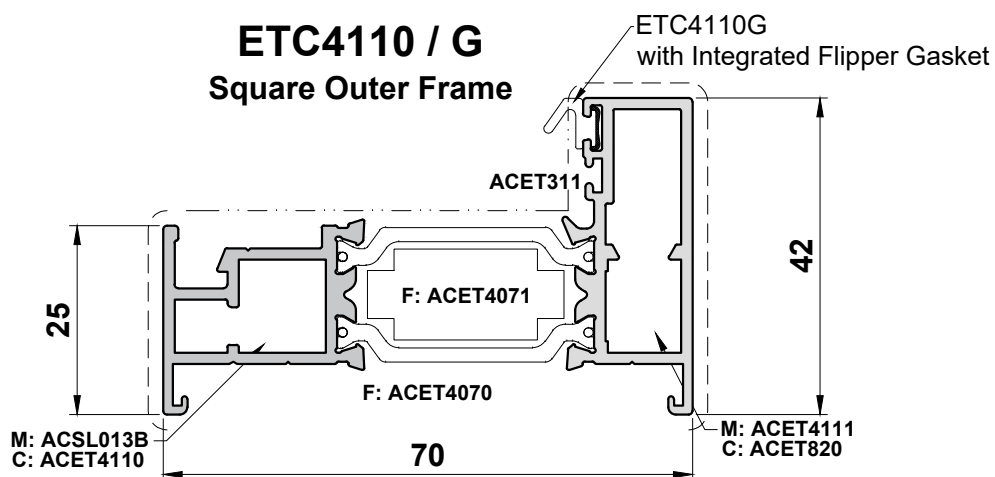
PROFILES : TECHNICAL INFORMATION

Number	Picture	Page	Perim. mm	Mec. mm	lx(cm4) wx(cm3)	ly(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M
													
													
													
													
													
													
													
													
													
								A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

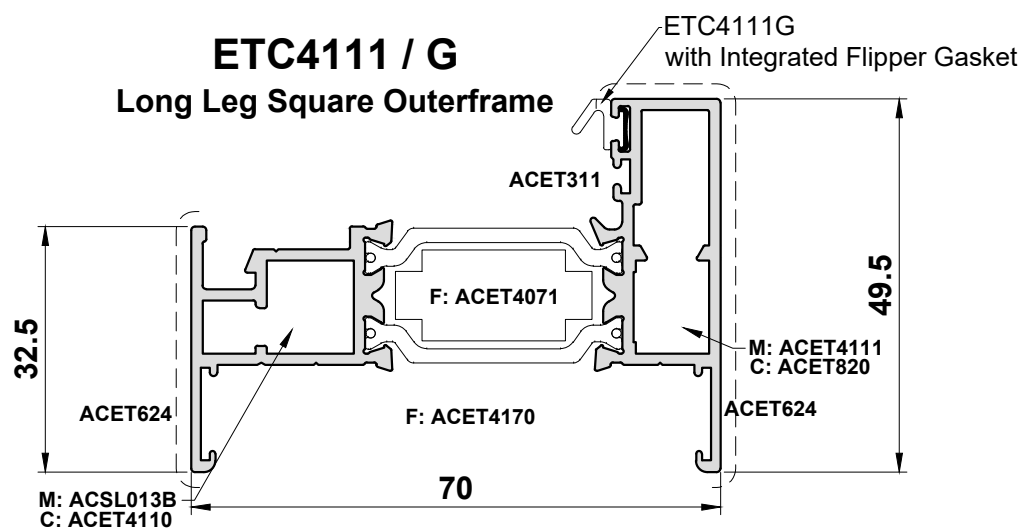
Primary Visible Side

Secondary Visible Side

ETC4110 / G
Square Outer Frame



ETC4111 / G
Long Leg Square Outerframe

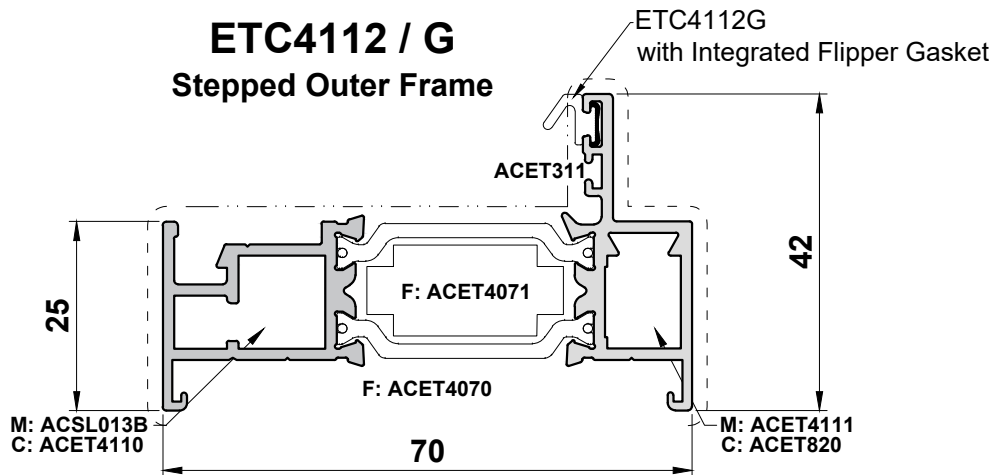


Scale 1:1

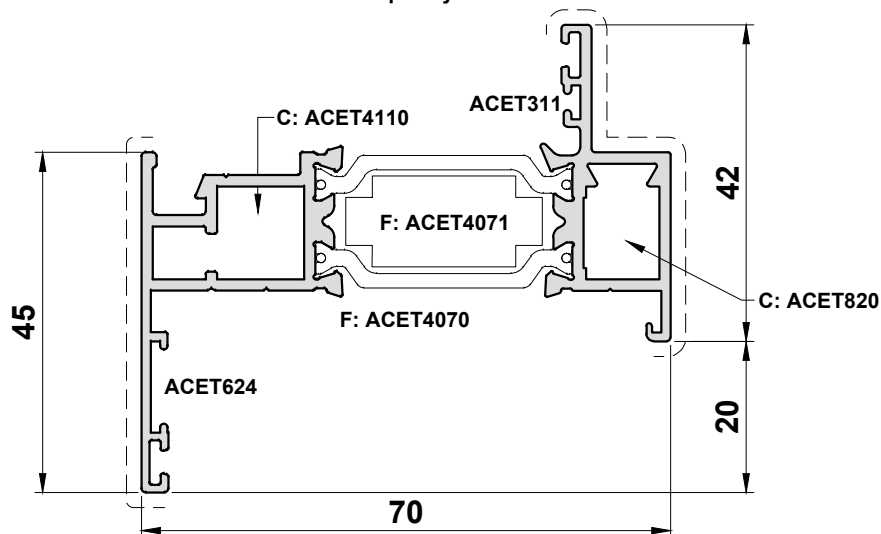
Primary Visible Side

Secondary Visible Side

ETC4112 / G
Stepped Outer Frame



ETC4113
Odd Leg Stepped Outerframe
Crimp Only



Scale 1:1

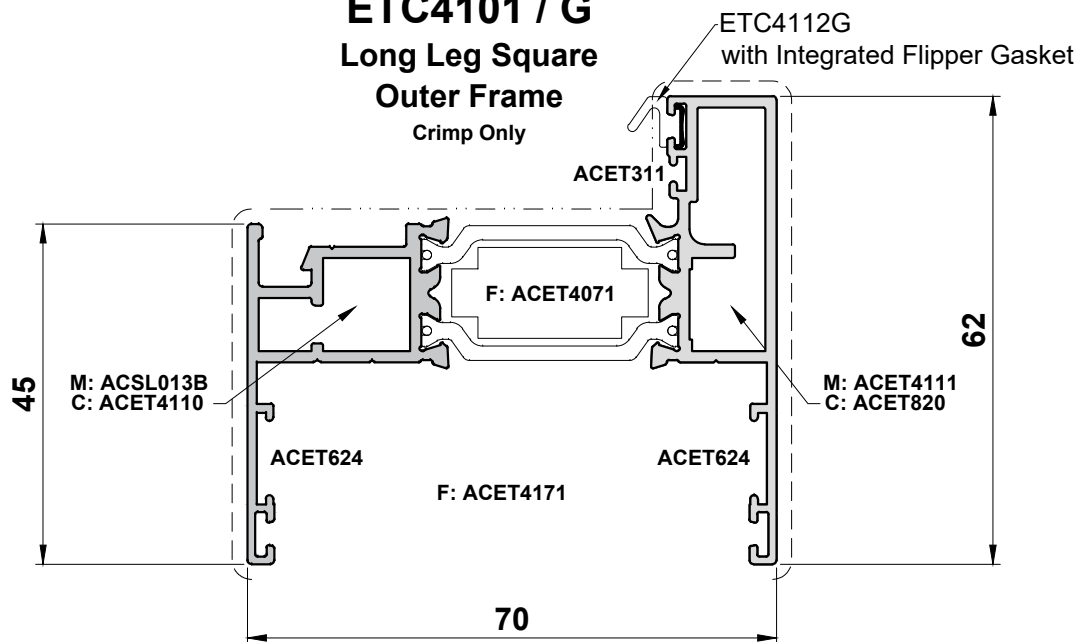
Primary Visible Side

Secondary Visible Side

ETC4101 / G

Long Leg Square Outer Frame

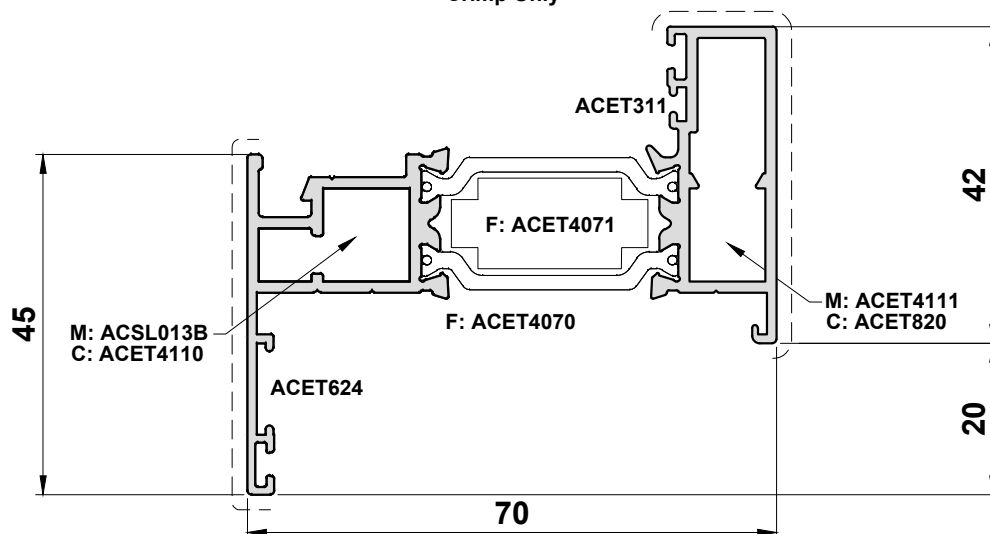
Crimp Only



ETC4114

Odd Leg Square Outerframe

Crimp Only



Scale 1:1

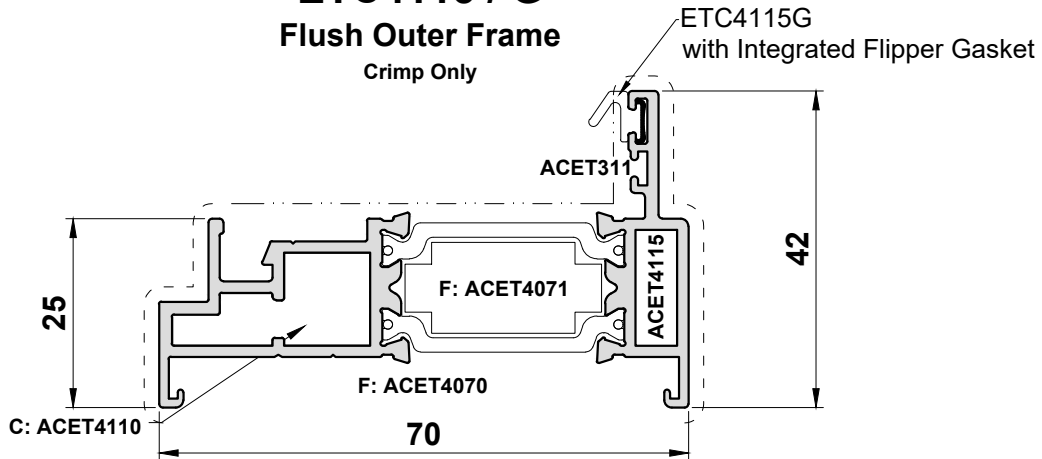
Primary Visible Side

Secondary Visible Side

ETC4115 / G

Flush Outer Frame

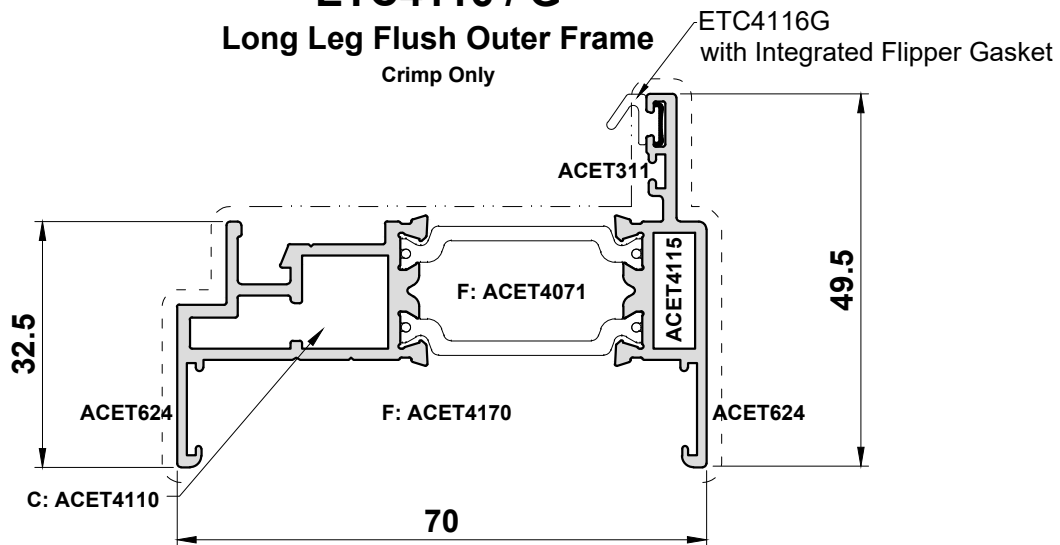
Crimp Only



ETC4116 / G

Long Leg Flush Outer Frame

Crimp Only



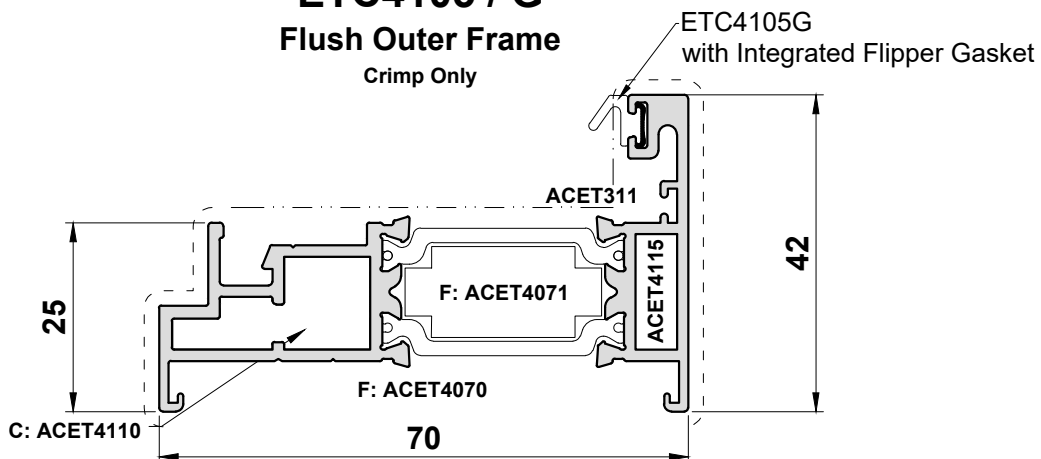
Scale 1:1

Primary Visible Side

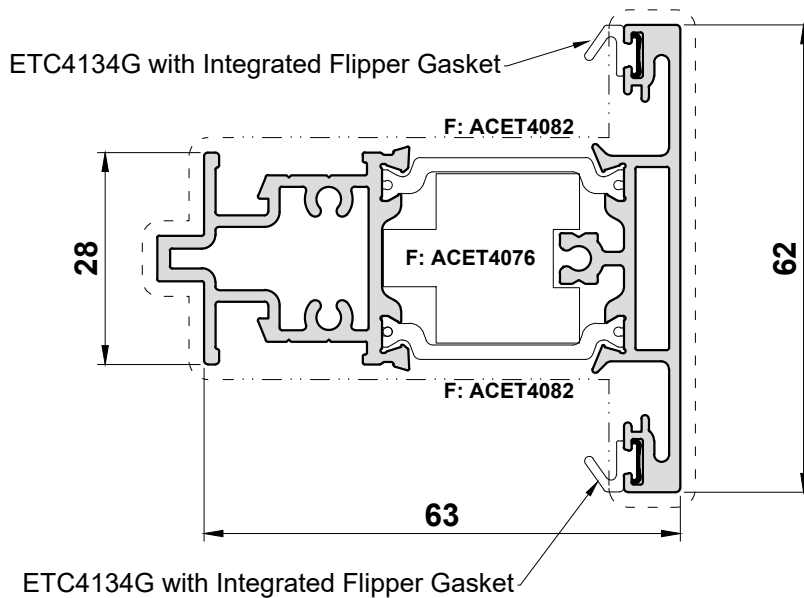
Secondary Visible Side

ETC4105 / G
Flush Outer Frame

Crimp Only



ETC4134 / G
Flush Transom/Mullion



Scale 1:1

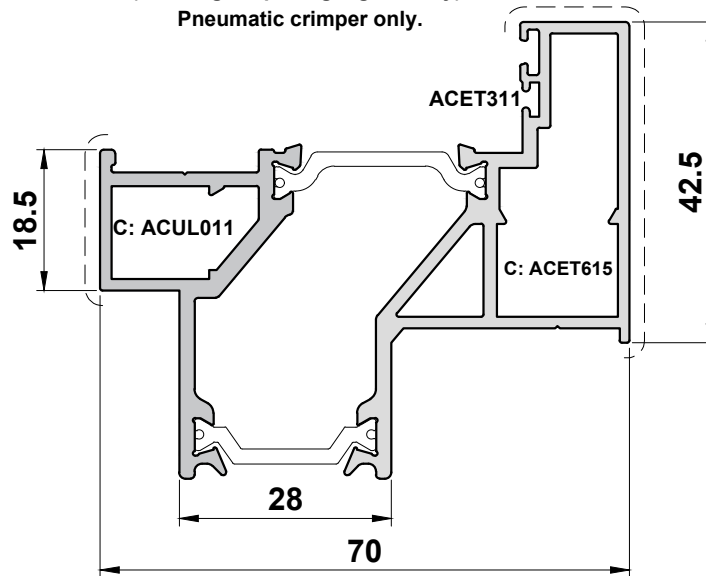
Primary Visible Side

Secondary Visible Side

ETC4117

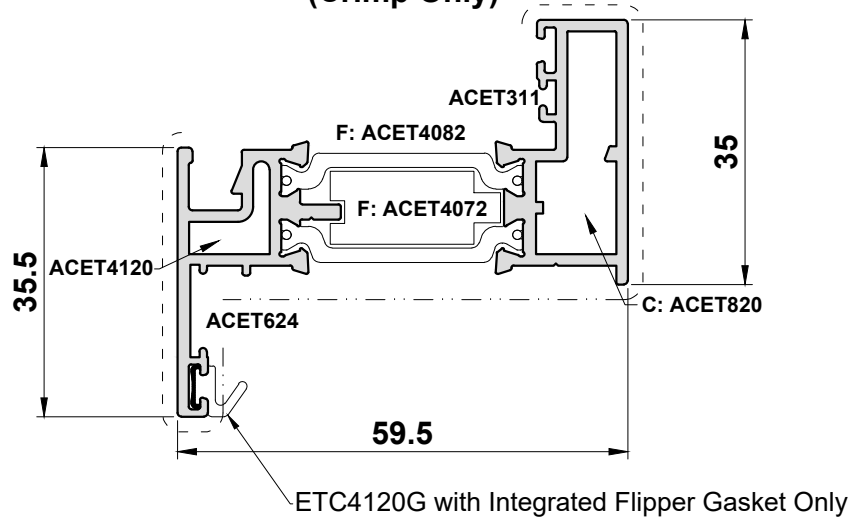
Curtain Wall Adaptor

(For Single Opening Lights Only)
Pneumatic crimper only.



ETC4120 / G

Externally Beaded Sash (Crimp Only)

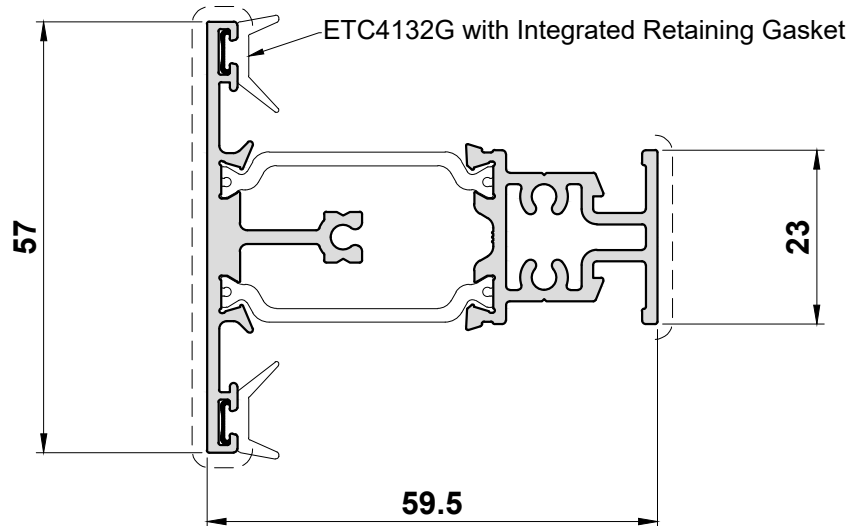


Scale 1:1

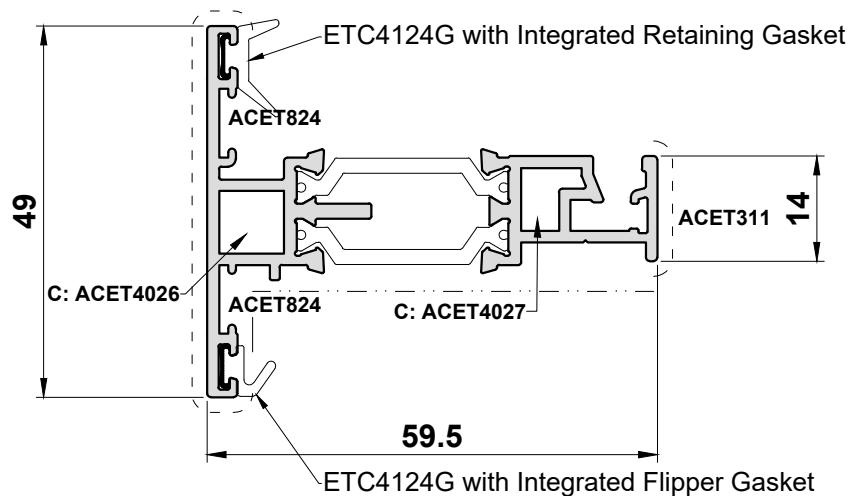
Primary Visible Side

Secondary Visible Side

ETC4132 / G
ETC4124 Dummy Transom



ETC4124 / G
Slimline Sash

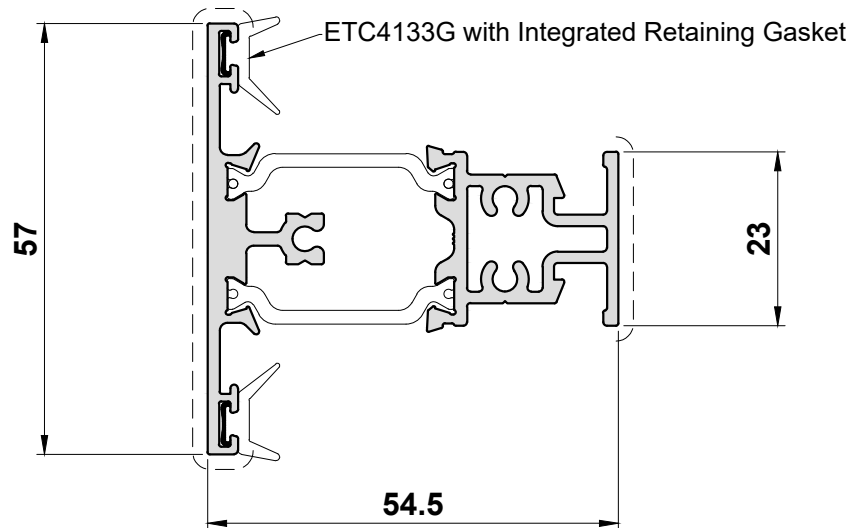


Scale 1:1

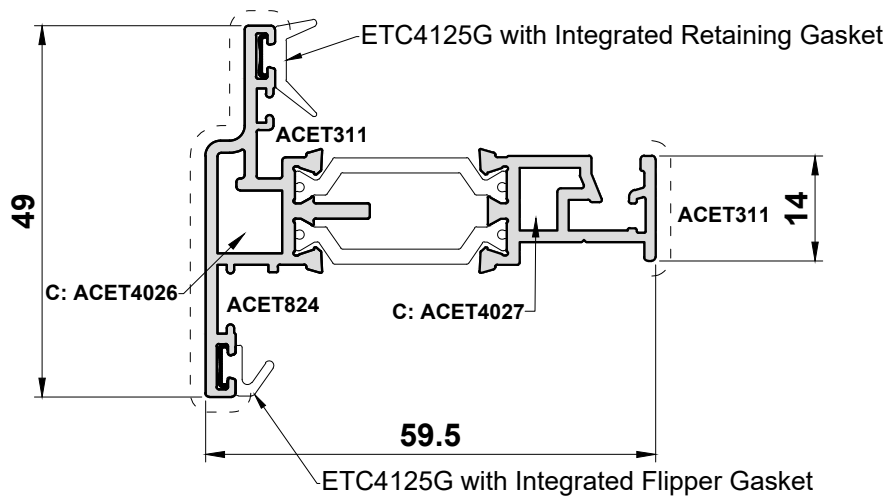
Primary Visible Side

Secondary Visible Side

ETC4133 / G
ETC4125 Dummy Transom



ETC4125 / G
Heritage Sash
for 24mm Glazing Only

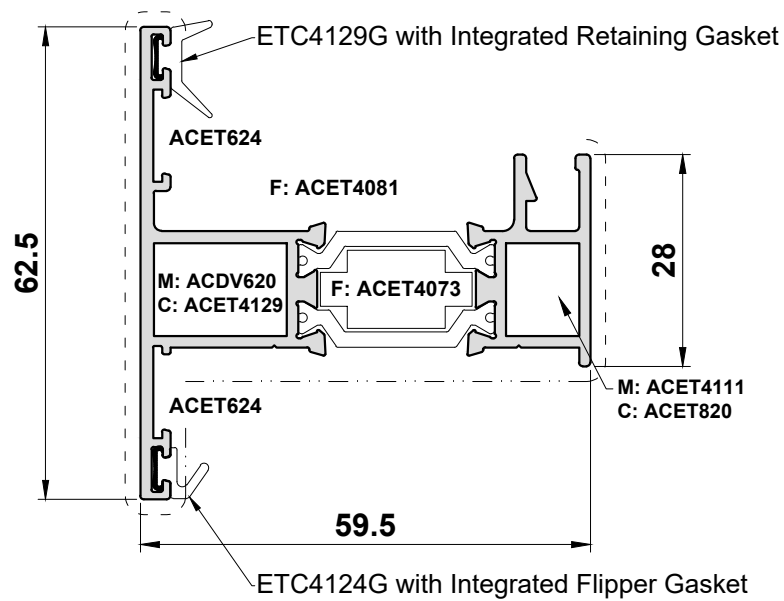


Scale 1:1

Primary Visible Side

Secondary Visible Side

ETC4129 / G
Internally Bead Sash

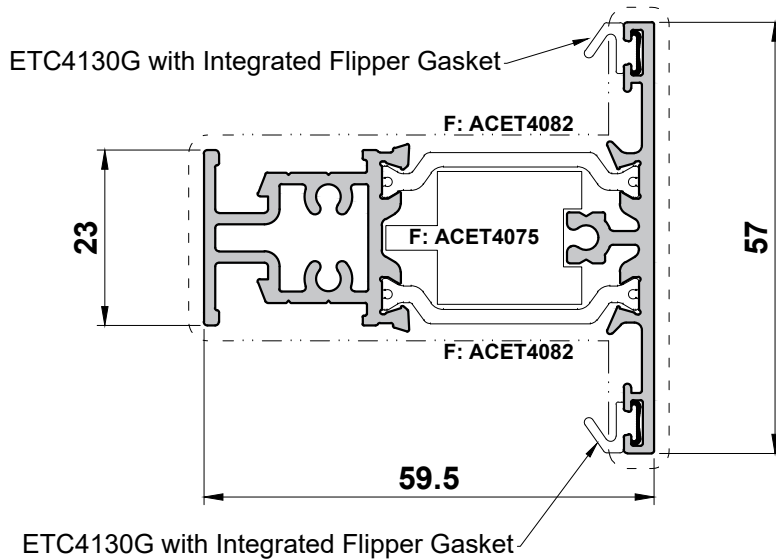


Scale 1:1

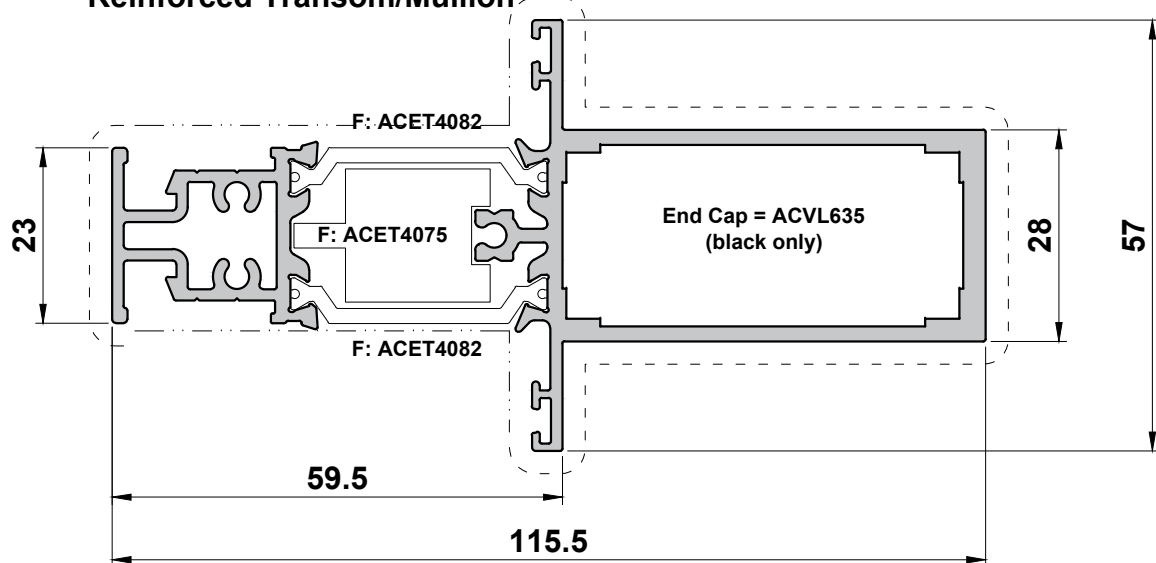
Primary Visible Side

Secondary Visible Side

ETC4130 / G Transom/Mullion



ETC4136 Reinforced Transom/Mullion

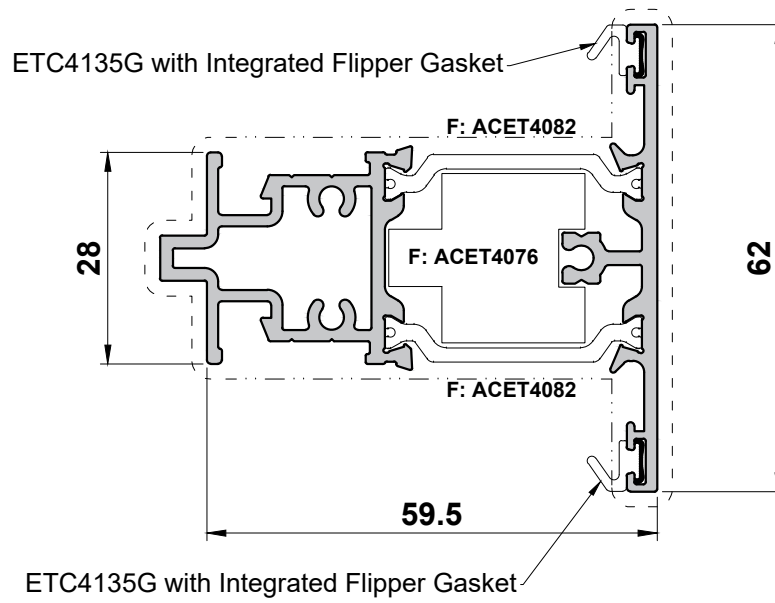


Scale 1:1

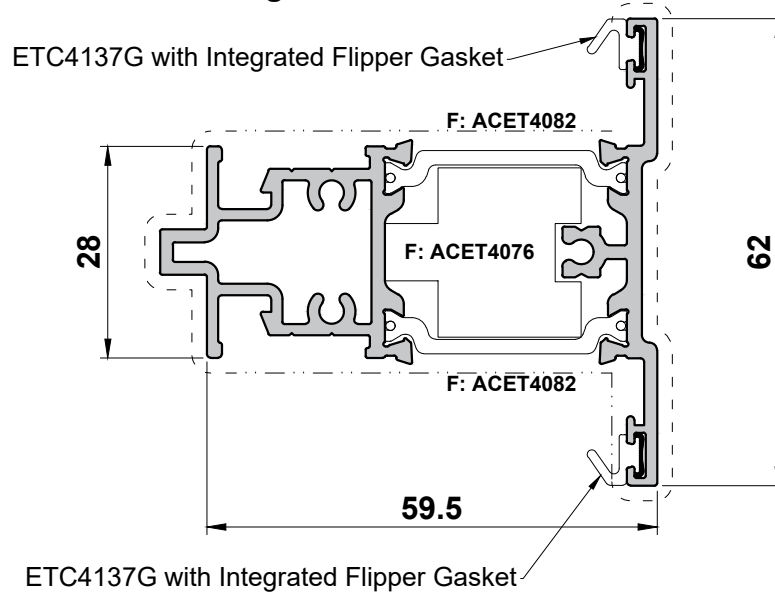
Primary Visible Side

Secondary Visible Side

ETC4135 / G
Flush Transom/Mullion



ETC4137 / G
Heritage Flush Transom/Mullion



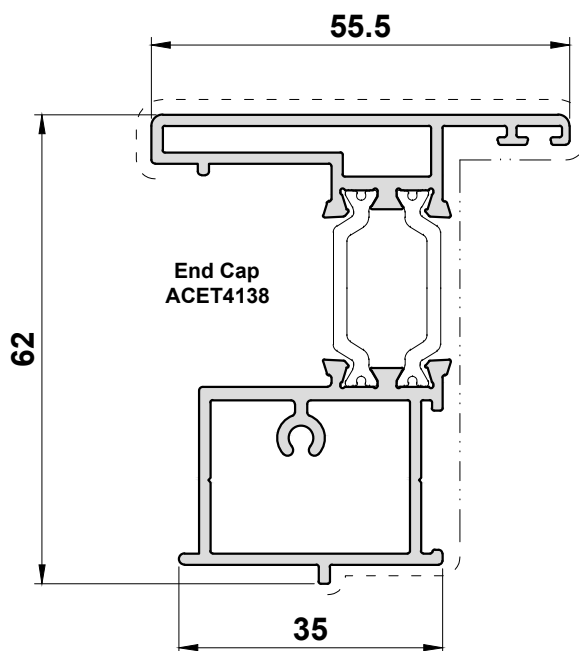
Scale 1:1

Primary Visible Side

Secondary Visible Side

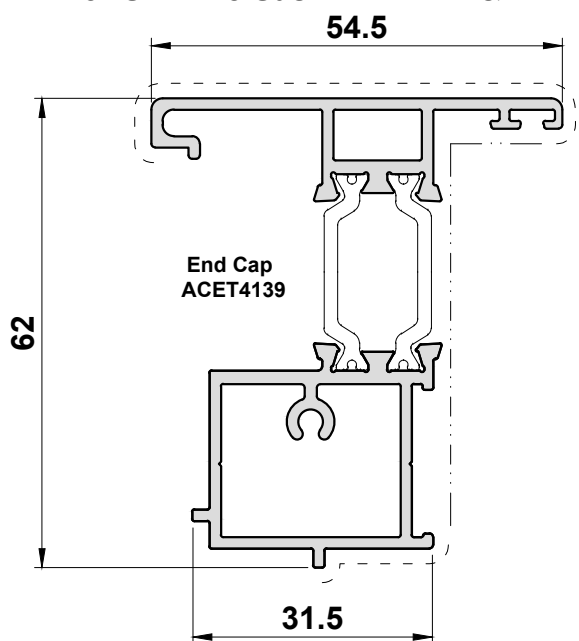
ETC4138

French Casement Mullion



ETC4139

French Casement Mullion for Slimline Sash ETC4124 & ETC4125

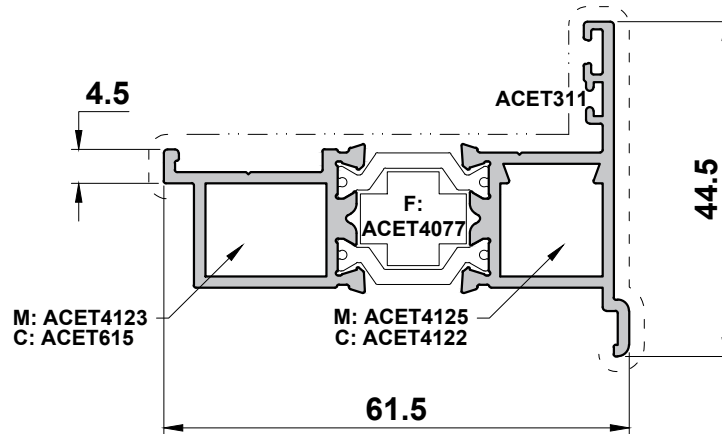


Scale 1:1

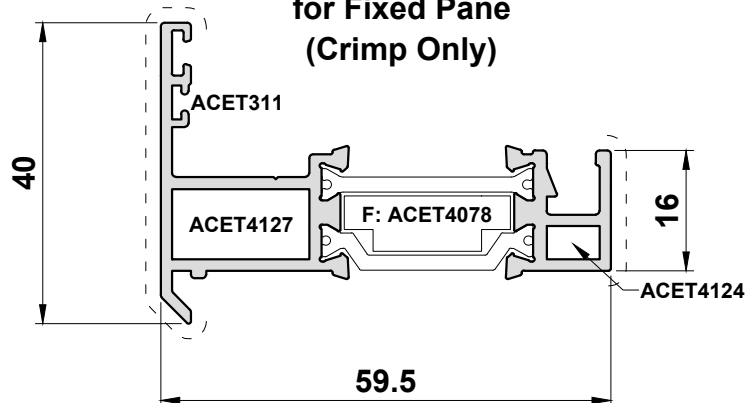
Primary Visible Side

Secondary Visible Side

ETC4146
Reverse Adaptor
for Opening Sash



ETC4147
Reverse Adaptor
for Fixed Pane
(Crimp Only)



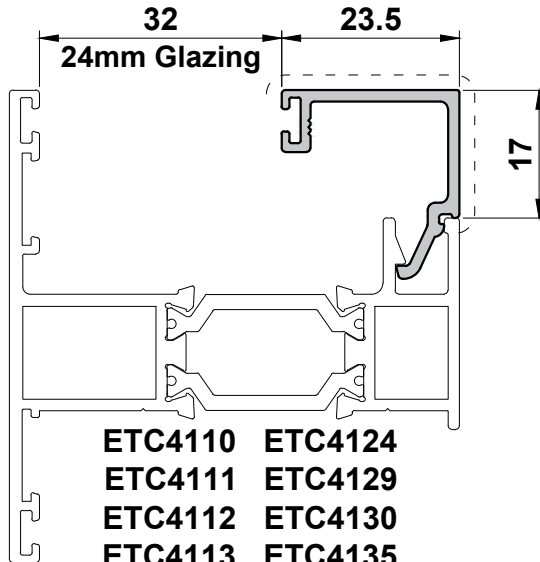
Scale 1:1

Primary Visible Side

Secondary Visible Side

UN3162N

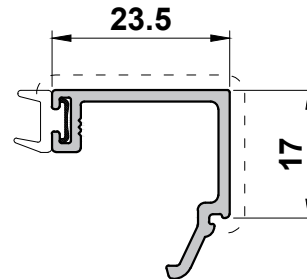
23.5mm Bead



ETC4110 ETC4124
ETC4111 ETC4129
ETC4112 ETC4130
ETC4113 ETC4135
ETC4115 ETC4136
ETC4116 ETC4147

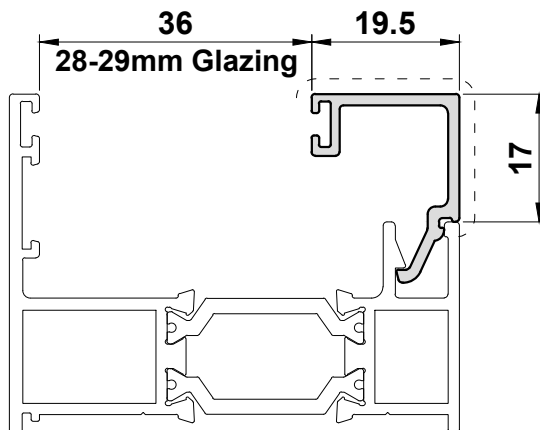
UN3162G

23.5mm Bead
with Gasket



UN3160

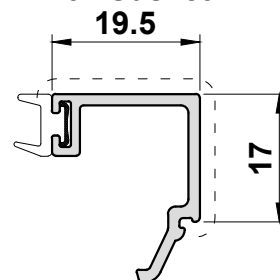
19.5mm Bead



ETC4110 ETC4124
ETC4111 ETC4125 (24mm glazing)
ETC4112 ETC4129
ETC4113 ETC4130
ETC4115 ETC4135
ETC4116 ETC4136
ETC4147

UN3160G

19.5mm Bead
with Gasket



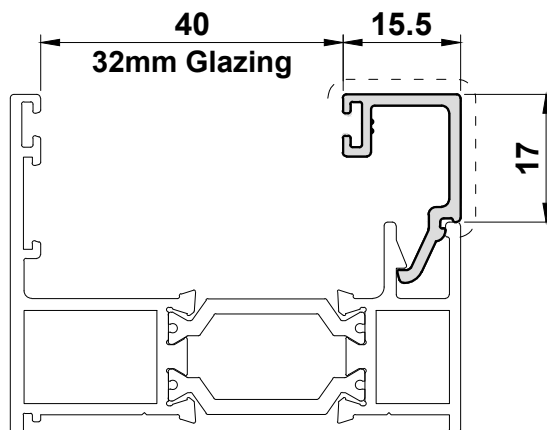
Scale 1:1

See Section E glazing chart for ETC4120 glazing details

Primary Visible Side

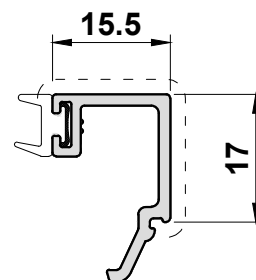
Secondary Visible Side

UN3164
15.5mm Bead

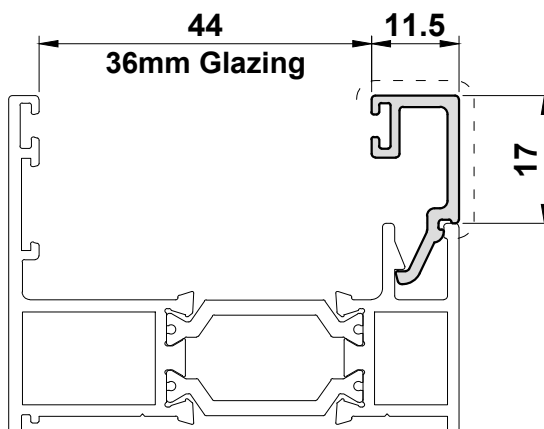


ETC4110 ETC4129
ETC4111 ETC4130
ETC4112 ETC4135
ETC4113 ETC4136
ETC4115 ETC4147
ETC4116

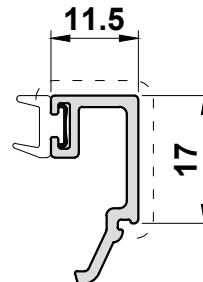
UN3164G
15.5mm Bead
with Gasket



ETC4179G
11.5mm Bead
with Gasket



ETC4110 ETC4129
ETC4111 ETC4130
ETC4112 ETC4135
ETC4113 ETC4136
ETC4115 ETC4147
ETC4116



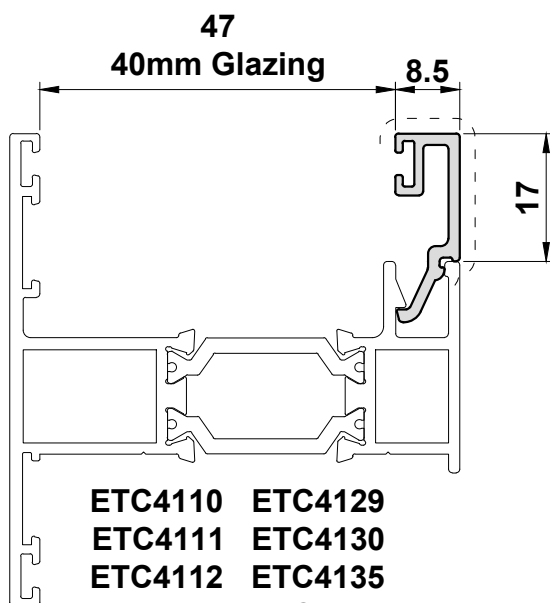
See Section E glazing chart for ETC4120 glazing details

Primary Visible Side

Secondary Visible Side

UN3166

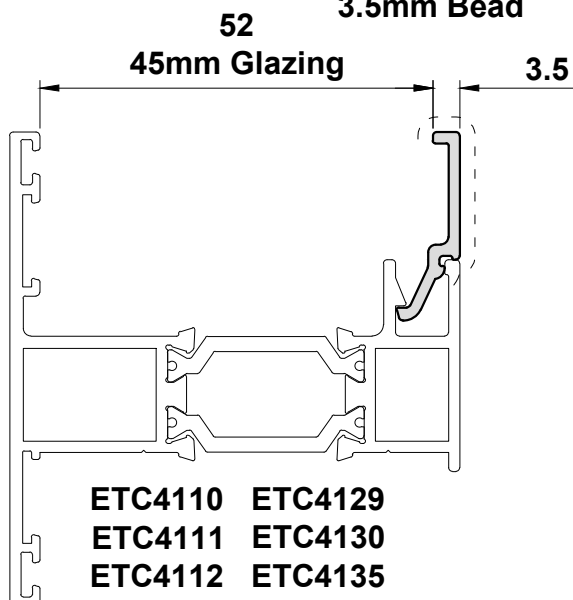
8.5mm Bead



ETC4110 ETC4129
ETC4111 ETC4130
ETC4112 ETC4135
ETC4113 ETC4136
ETC4115 ETC4147
ETC4116

UN3168

3.5mm Bead



ETC4110 ETC4129
ETC4111 ETC4130
ETC4112 ETC4135
ETC4113 ETC4136
ETC4115 ETC4147
ETC4116

See Section E glazing chart for ETC4120 glazing details

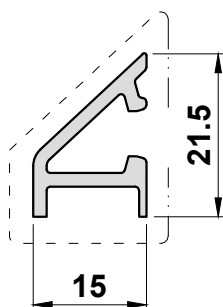
Primary Visible Side

Secondary Visible Side

VL72

Drip / Weather Bar

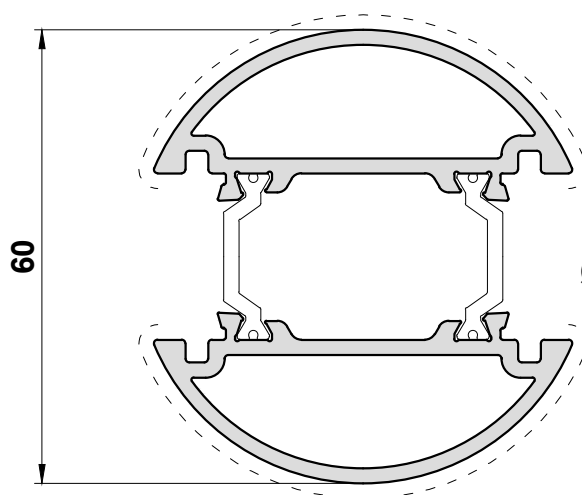
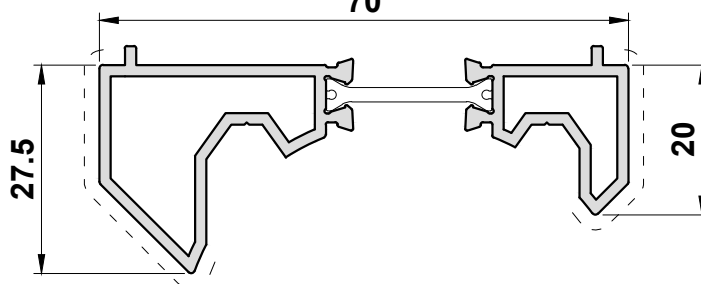
End Caps: ACVL059



UN3012

Bay Pole Adaptor

70



ETC869

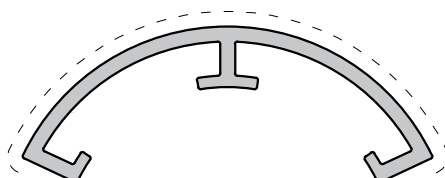
Ø60mm Bay Pole

Scale 1:1

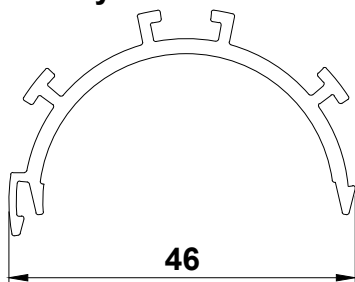
Primary Visible Side

Secondary Visible Side

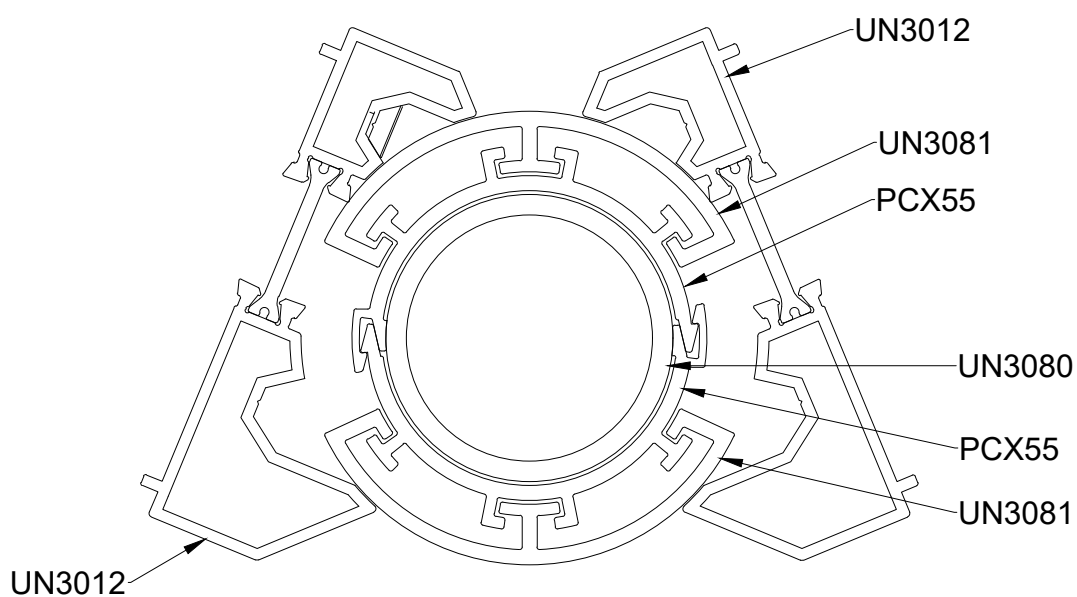
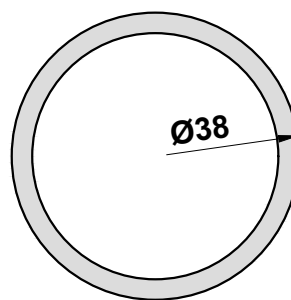
UN3081
Bay Pole Cover



PCX55
Bay Pole Isolator



UN3080
Bay Pole

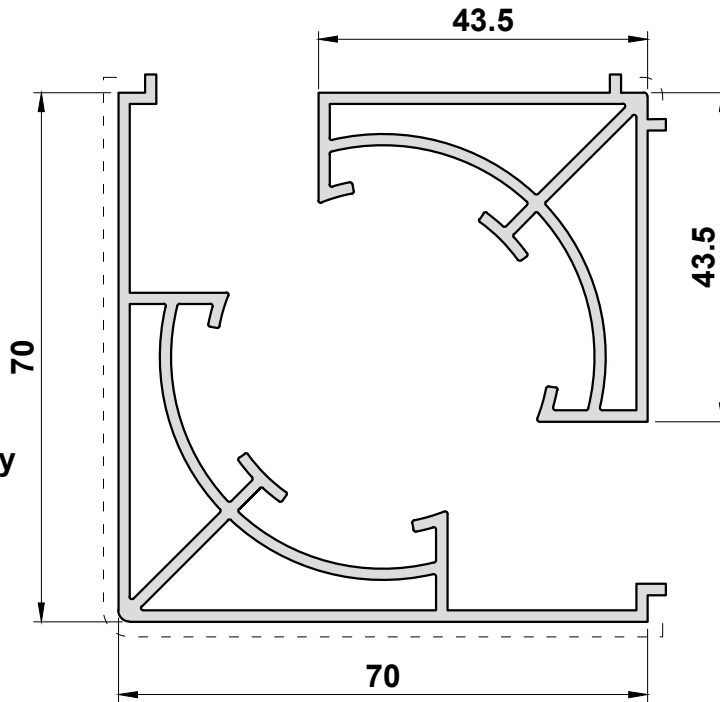


Scale 1:1

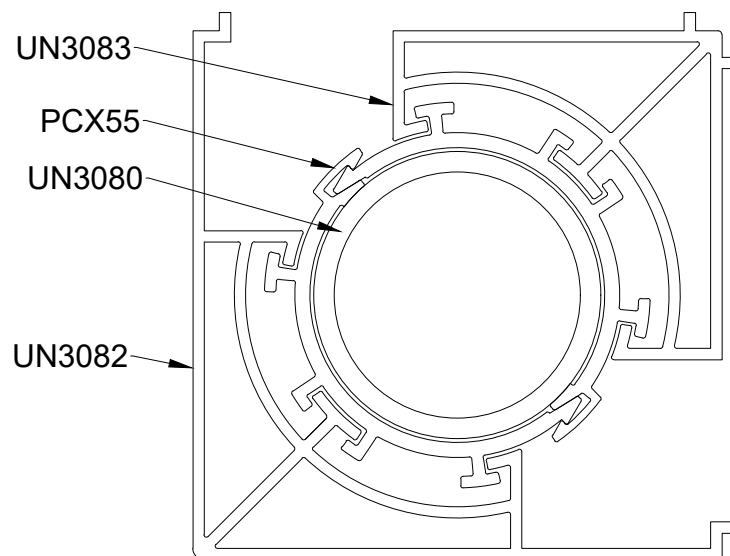
Primary Visible Side

Secondary Visible Side

UN3082
External 90° Bay
Pole Adaptor



UN3083
Internal 90° Bay
Pole Adaptor

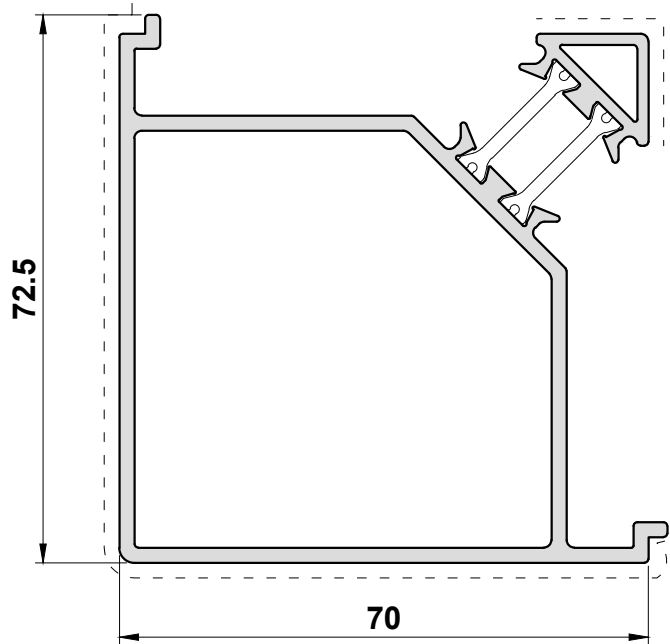


Scale 1:1

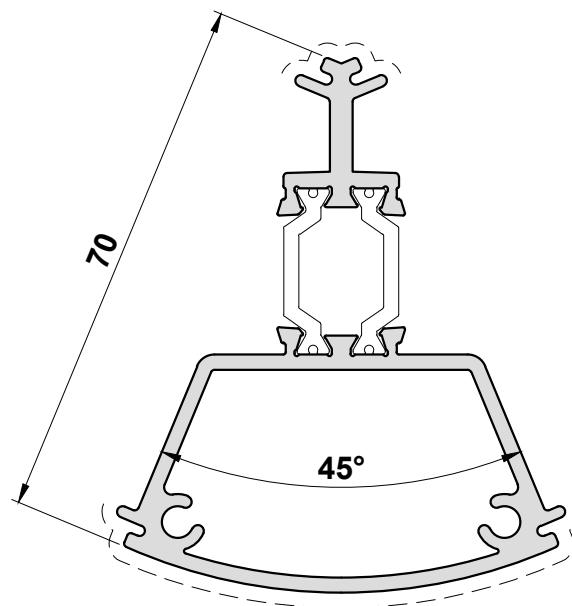
Primary Visible Side

Secondary Visible Side

UN3010
90° Corner Post



UN3011
135° Bay Pole

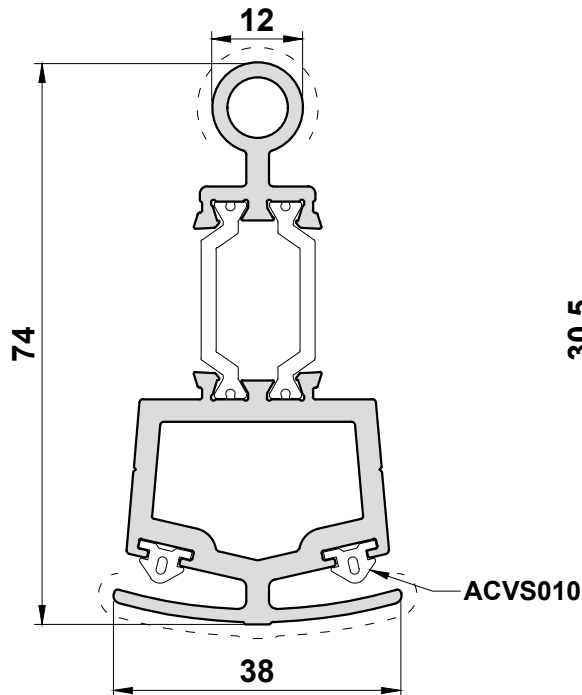


Scale 1:1

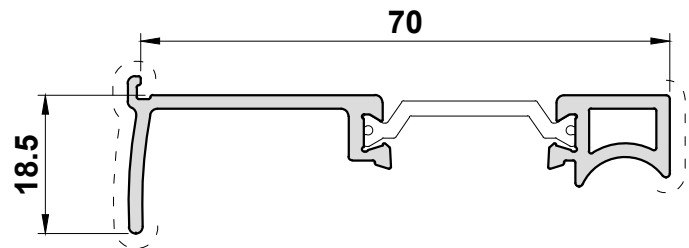
Primary Visible Side

Secondary Visible Side

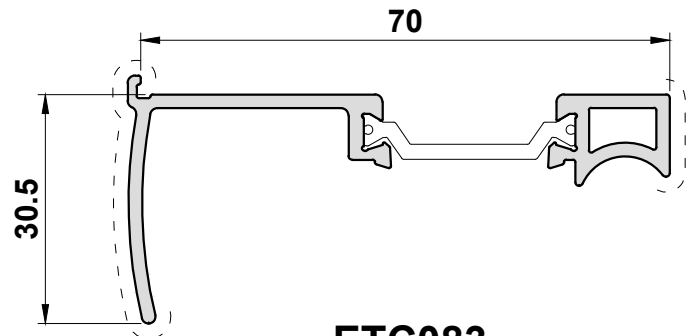
ETC080
Bay Pole



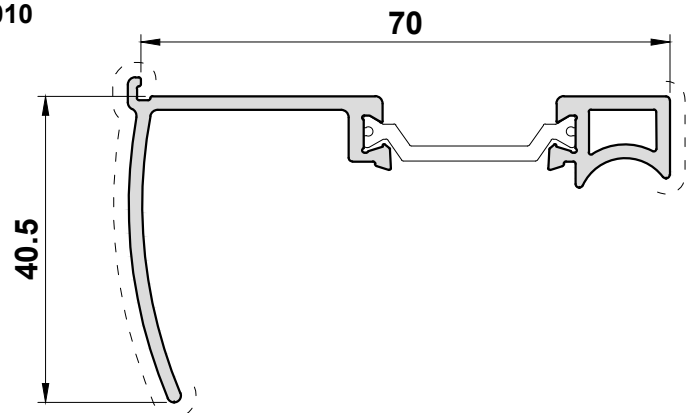
ETC081
169° - 150°
Bay Pole Adaptor



ETC082
149° - 130°
Bay Pole Adaptor



ETC083
129° - 115°
Bay Pole Adaptor



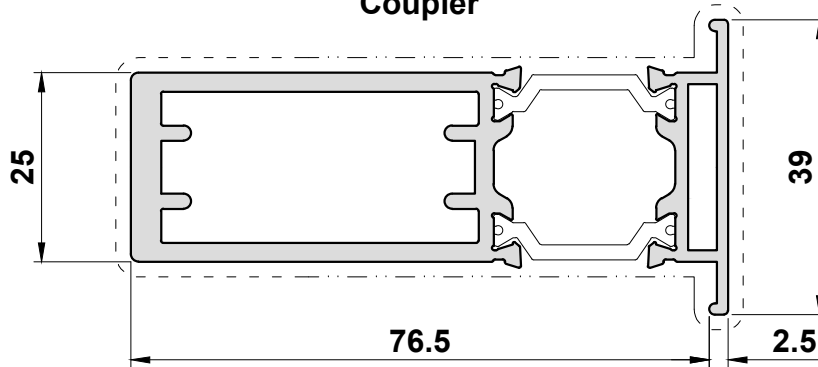
Scale 1:2

Primary Visible Side

Secondary Visible Side

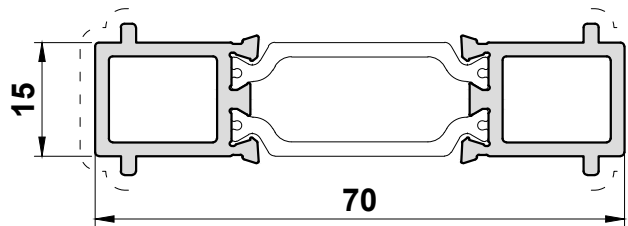
ETC357

Coupler



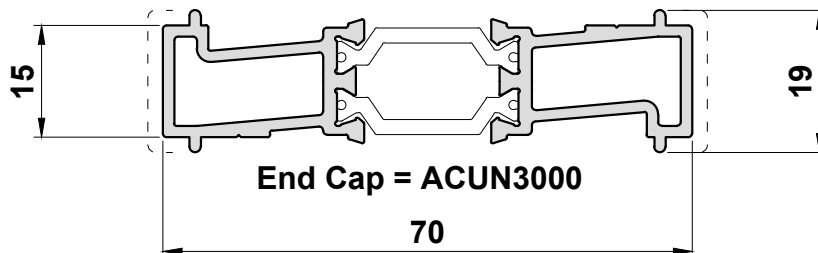
UN3015

70mm x 15mm Coupler



UN3000

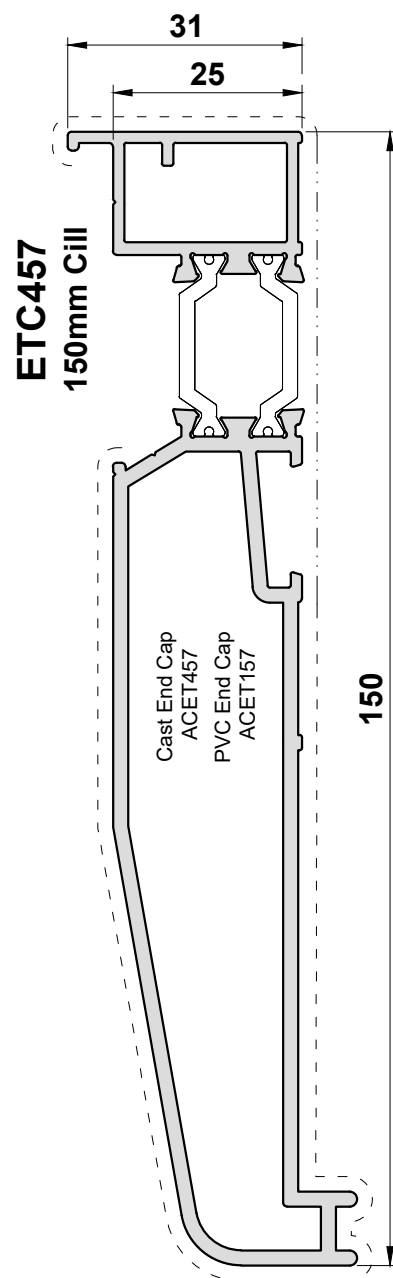
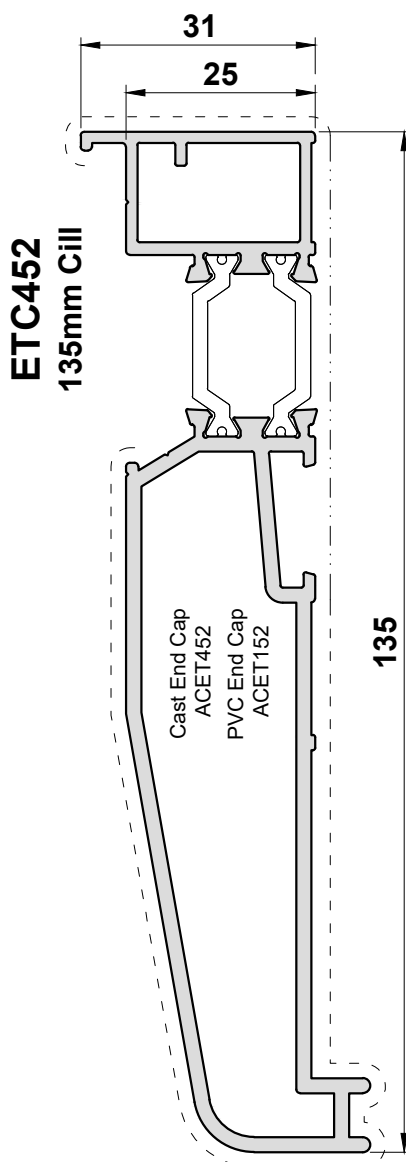
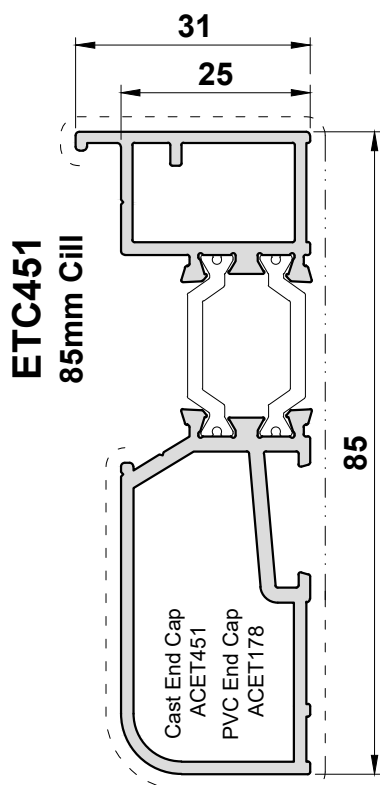
Flush Horizontal Coupler



Scale 1:1

Primary Visible Side

Secondary Visible Side

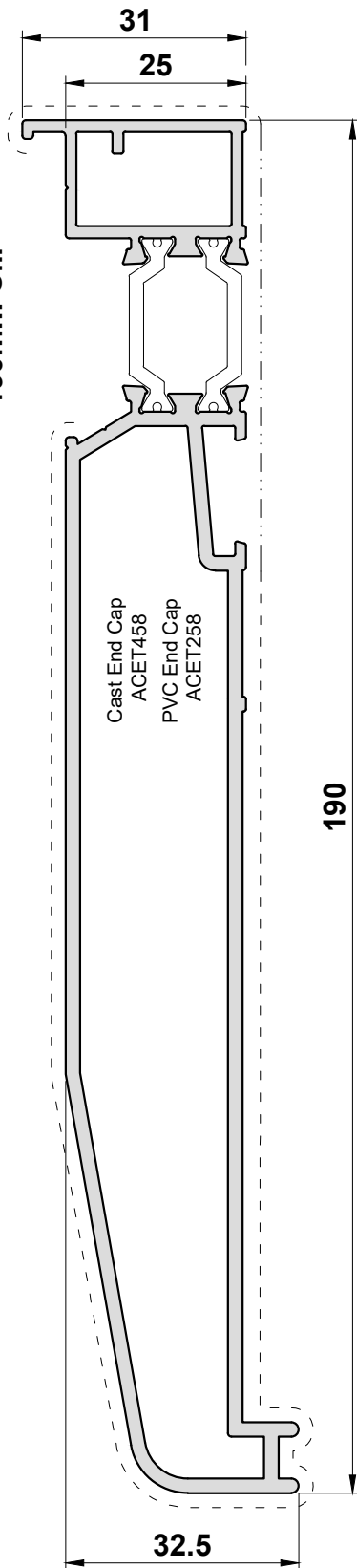


Scale 1:1

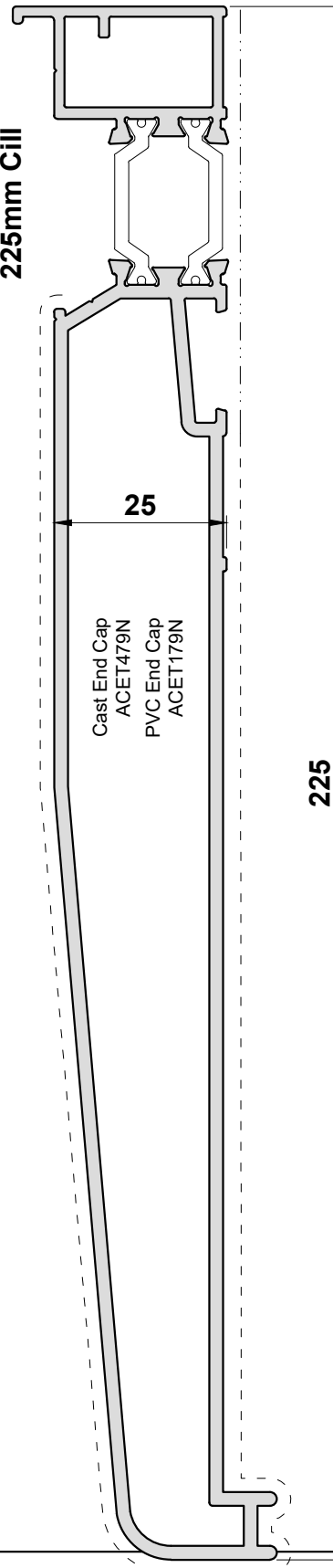
Primary Visible Side

Secondary Visible Side

ETC458
190mm Cill



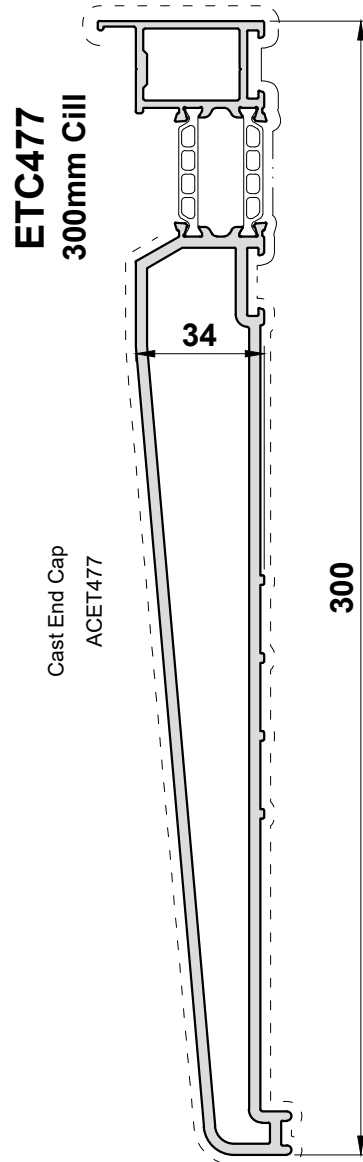
ETC479N
225mm Cill



Scale 1:1

Primary Visible Side

Secondary Visible Side



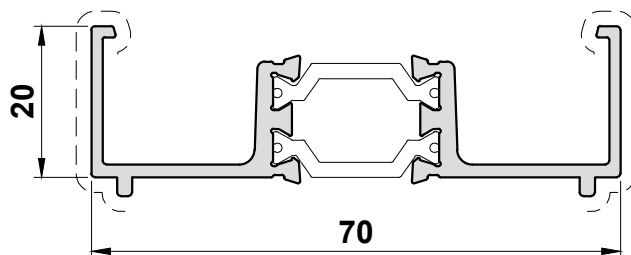
Scale 1:1

Primary Visible Side

Secondary Visible Side

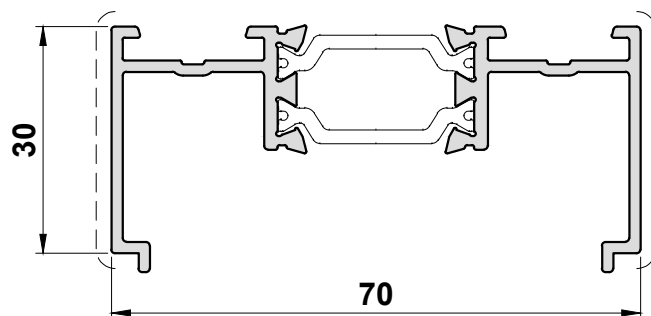
UN3020

70mm x 20mm Frame Extension



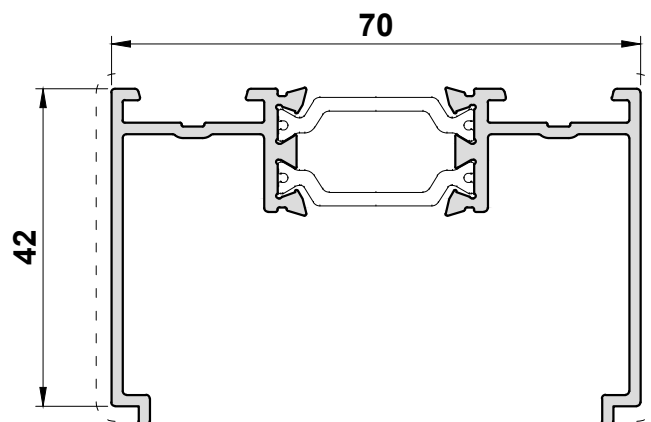
UN3370

30mm x 70mm Head Extension



UN3270

70 x 42mm Head Extension



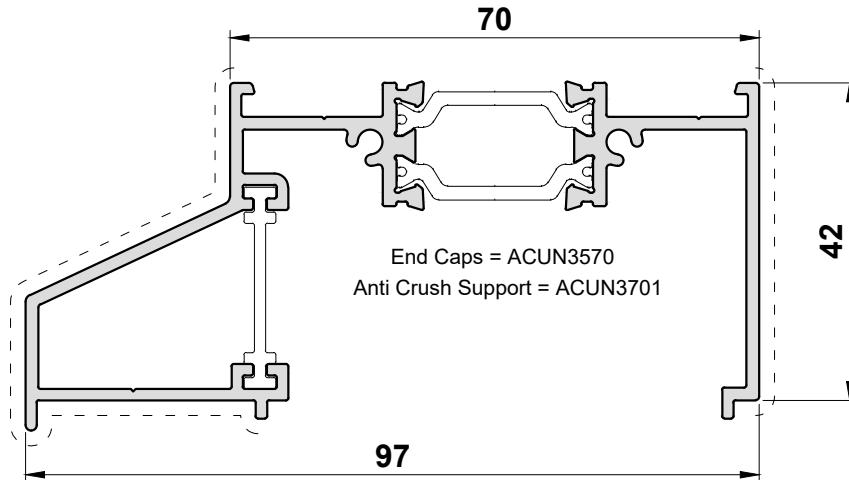
Scale 1:1

Primary Visible Side

Secondary Visible Side

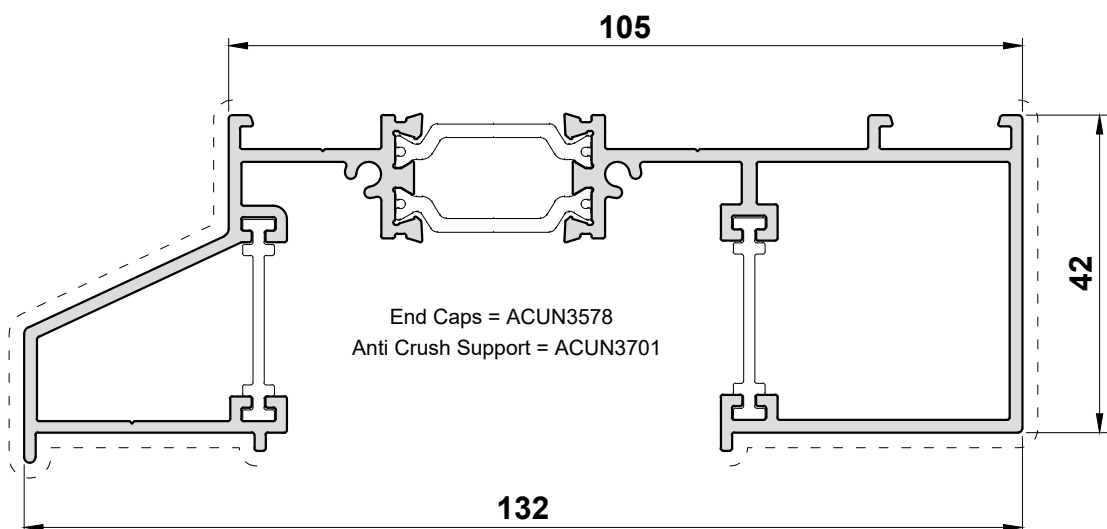
UN3570

70 x 42mm Hooded Head Extension



UN3577

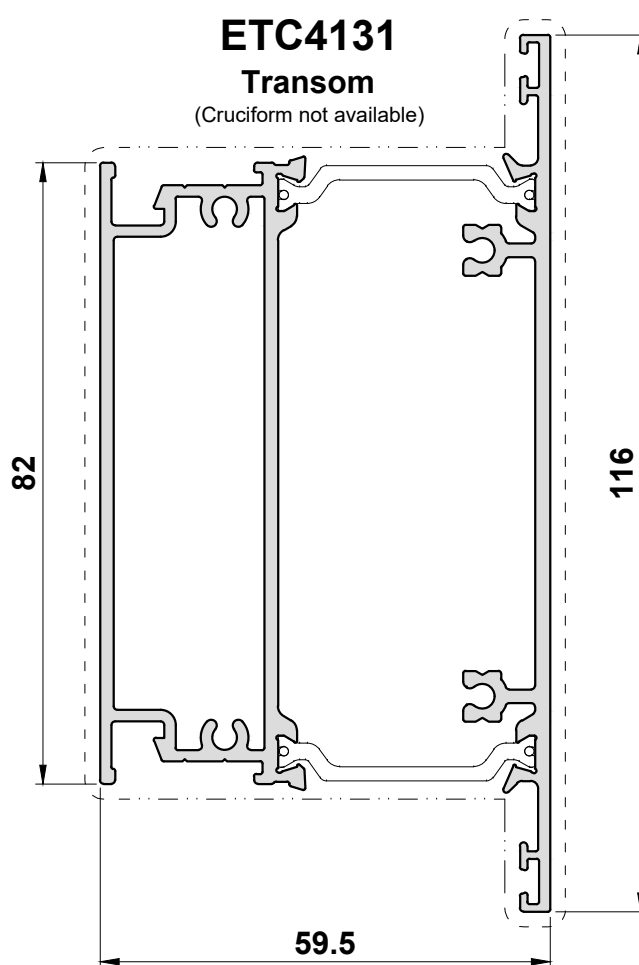
70 x 42mm Hooded Head Extension



Scale 1:1

Primary Visible Side

Secondary Visible Side

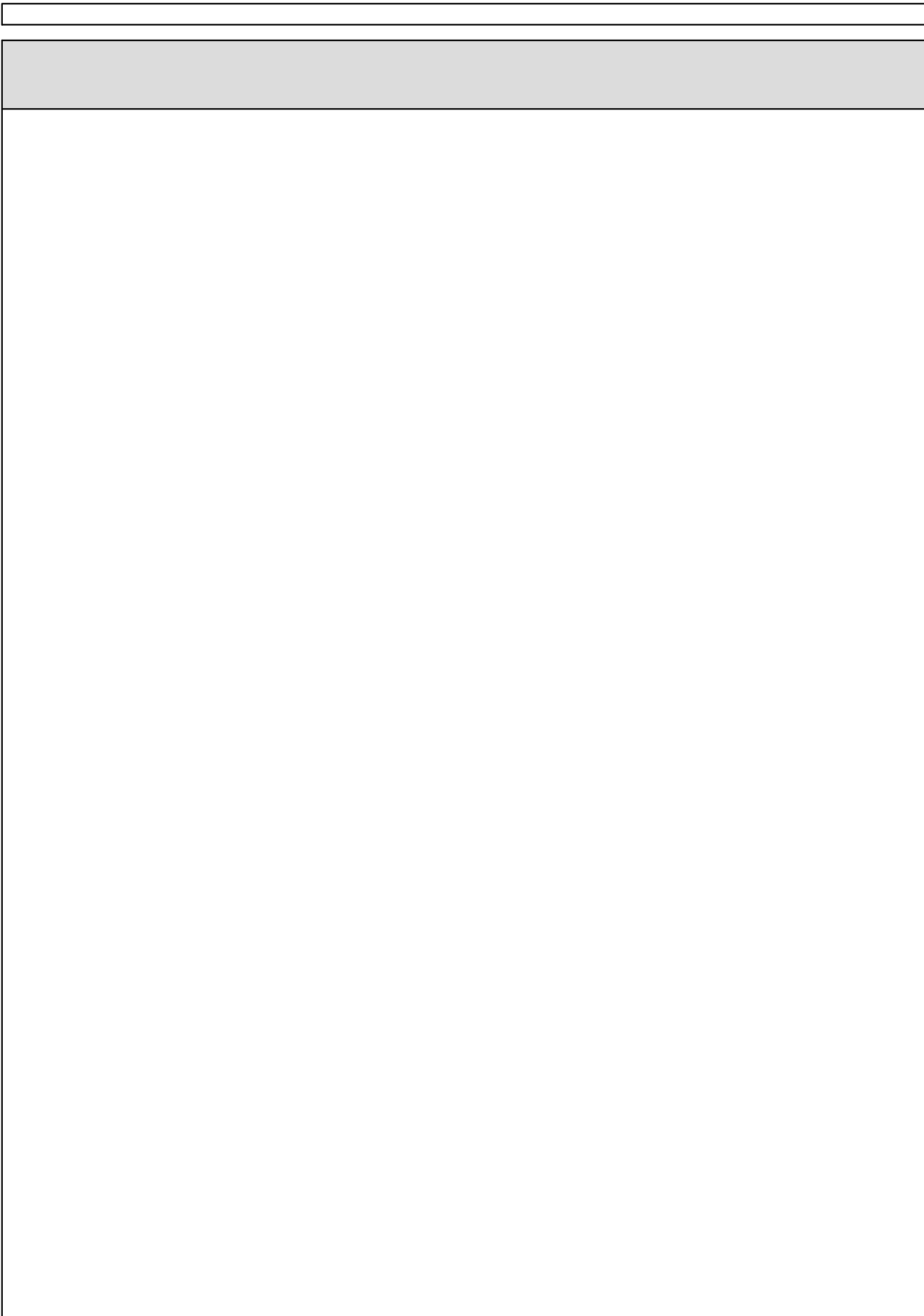


Scale 1:1

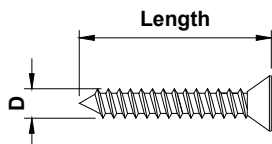
Section B

Accessories

Photos & Drawings



Countersunk Screws



Gauge	'D' (mm)
No.6	3.5
No.7	3.8
No.8	4
No.10	5
No.12	6

Part Number	Gauge	X	Length	Description	Box Qty.
ACUN3530	No.6	X	5/8" (16mm)	Countersunk Pozi Self Tapper S/S	100
MUA025SSZ	No.6	X	1" (25mm)	Countersunk Pozi Self Tapper S/S	100
ACET067	No.7	X	1/2" (12mm)	Countersunk Pozi Self Tapper S/S	100
ACET060	No.7	X	1" (25mm)	Countersunk Pozi Self Tapper S/S	100
ACET066	No.7	X	1 1/2" (40mm)	Countersunk Pozi Self Tapper S/S	100
MUA067SSZ	No.7	X	2" (50mm)	Countersunk Pozi Self Tapper S/S	100
ACET064	No.8	X	5/8" (16mm)	Countersunk Pozi Self Tapper S/S	100
ACUN3512	No.8	X	1 1/4" (30mm)	Countersunk Pozi Self Tapper S/S	100
ACUN3513	No.8	X	1 3/4" (45mm)	Countersunk Pozi Self Tapper S/S	100
ACET072	No.8	X	2 1/2" (60mm)	Countersunk Pozi Self Tapper S/S	100
ACET048	No.10	X	3/8" (10mm)	Countersunk Pozi Self Tapper S/S	100
ACIM062	No.10	X	1 1/4" (30mm)	Countersunk Pozi Self Tapper S/S	100
ACET062	No.10	X	2" (50mm)	Countersunk Pozi Self Tapper S/S	100
ACET076	No.10	X	2 1/2" (60mm)	Countersunk Pozi Self Tapper S/S	100

POLYAMIDE SCREWS

Part Number	Gauge	X	Length	Description	Box Qty.
ACET490	4.3mm	X	16mm	Countersunk PH2 Polyamide Screw	1000
ACET290	4.3mm	X	20mm	Countersunk PH2 Polyamide Screw	100
ACET390	4.3mm	X	25mm	Countersunk PH2 Polyamide Screw	200
ACET190	4.3mm	X	45mm	Countersunk PH2 Polyamide Screw	1000
ACVS062	4.3mm	X	65mm	Countersunk PH2 Polyamide Screw	1000



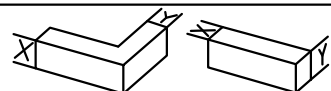
T-BARS
ACVG65=2.5mm
ACVG66=3.0mm
ACVL150=4.0mm



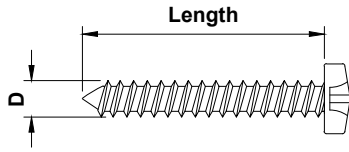
Screw (Grub)

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

W = White
Z = Black



Pan Head Screws



Gauge	'D' (mm)
No.6	3.5
No.7	3.8
No.8	4
No.10	5
No.12	6

Part Number	Gauge	X	Length	Description	Box Qty.
ACET068	No.8	X	3/8" (10mm)	Pozi Flange AB	100
ACET063	No.8	X	1/2" (12mm)	Pan Head Self Tapper	100
ACET070	No.8	X	1/2" (12mm)	Pozi Flange Self Tapper S/S	100
ACUN3535	No.8	X	5/8" (16mm)	Pan Head Pozi S/S	100
ACET099	No.8	X	3/4" (20mm)	Pozi Flange Self Tapper S/S	100
ACDR050	4.8mm	X	32mm	Pan Head Pozi S/S	200
PUA028	No.10	X	1" (25mm)	Pan Head Pozi S/S	100
ACDR052	No.10	X	2" (50mm)	Pan Head Self Tapper S/S	200
ACET079	No.10	X	2 1/2" (60mm)	Pan Head Pozi S/S	100
ACW20160	No.12	X	1" (25mm)	Flange Head Self Tapper S/S	100
ACMC109	6.3mm	X	38mm	DIN7981 - Pan Head Self Tapper	200



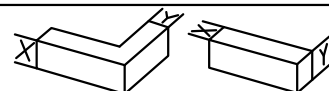
T-BARS
ACVG65=2.5mm
ACVG66=3.0mm
ACVL150=4.0mm



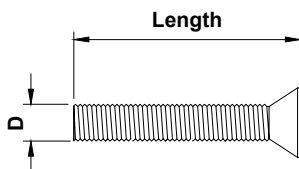
Screw (Grub)

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

W = White
Z = Black



Machine Screws



Thread	'D' (mm) Nominal
M4	4
M5	5
M6	6
M8	8
M10	10

Part Number	Thread	X	Length	Description	Box Qty.
ACET122	M4	X	10	CSK Pozi Machine Screw	100
ACET123	M4	X	20	CSK Pozi Machine Screw	100
ACDV264	M4	X	35	CSK Pozi Machine Screw	100
ACSG071	M4	X	40	CSK Pozi Machine Screw	100
ACDV266	M4	X	45	CSK Pozi Machine Screw	100
ACDV262	M4	X	50	CSK Pozi Machine Screw	100
ACDV265	M4	X	60	CSK Pozi Machine Screw	100
ACDR051	M5	X	10	CSK Pozi Machine Screw	100
ACET069	M5	X	12	CSK Pozi Machine Screw	100
HEA132	M5	X	16	CSK Pozi Machine Screw	100
WCA134	M5	X	20	CSK Pozi Machine Screw	100
WCA143	M5	X	25	CSK Pozi Machine Screw	50
ACVS061	M5	X	40	CSK Pozi Machine Screw	100
ACET133	M5	X	50	CSK Pozi Machine Screw	100
ACET220	M5	X	60	CSK Pozi Machine Screw	100
ACET238	M5	X	70	CSK Pozi Machine Screw	100
ACMX861	M5	X	80	DIN965 - CSK Machine Screw	10
ACMX862	M5	X	90	DIN965 - CSK Machine Screw	10
ACUN3503	M6	X	10	CSK Socket Machine Screw	24
ACUN3501	M6	X	13	CSK Flange Socket Machine Screw	48
ACMX852	M6	X	16	DIN965 - CSK Machine Screw	10
HEA390	M6	X	16	CSK Socket Machine Screw	32
ACET235	M6	X	60	CSK Pozi Machine Screw	100
ACET237	M6	X	70	CSK Pozi Machine Screw	100



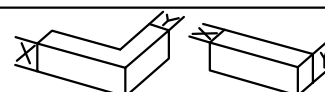
T-BARS
ACVG66=2.5mm
ACVG66=3.0mm
ACVL150=4.0mm



Screw (Grub)

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

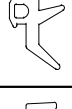
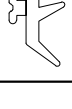
W = White
Z = Black



Glazing Gaskets

Retaining Gasket

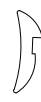
Commonly known as an E Gasket.
Retaining gaskets create a seal between the Glass and the Aluminium Profile.

High Line	2mm		ACVG231
			200m
			BL
	3mm		ACVG31
			200m
			BL
	4mm		ACVG131
			100m
			BL
Low Line	2mm		ACET843
			200m
			BL
	3mm		ACET842
			200m
			BL
	4mm		ACET841
			200m
			BL
	4mm		ACET835
			200m
			BL
	4mm		ACVG131N
			100m
			BL
	5mm		ACUN3065
			100m
			BL

Thickness	Drawing 1:1	Part number
		Coil length
		Available Colours

Wedge Gasket

Wedge Gaskets help to hold the bead in place by providing tension between the bead and the glazing unit.

High Line	3mm		ACVG32
			100m
			BL
	3mm		ACVG32N
			100m
			BL
	4mm		ACVG33
			100m
			BL
	4mm		ACVG33N
			100m
			BL
	5mm		ACVG34
			100m
			BL
	5mm		ACVG34N
			100m
			BL
	6mm		ACVG340
			100m
			BL
	6mm		ACVG340N
			100m
			BL
Low Line	4mm - 3mm		ACW20038
			50m
			BL
	5mm - 4mm		ACET848
			200m
			BL

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACDV620 Mechanical Cleat	24	Pack	ETC4129	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACDV916 Bead Punch Tool	1	each	UN3160G UN3160	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET041 Cill Nose Bracket	1	Each	ETC451 ETC452 ETC457 ETC458 ETC477 ETC479	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET125 Anti-Twist Clip	100	Pack	ETC4110 ETC4112 ETC4130	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET130 Galvanised Steel Fixing Strap 200mm x 25mm x 1.5mm	100	Pack	ETC4101 ETC4105 ETC4110 ETC4111 ETC4112 ETC4113 ETC4114 ETC4115 ETC4116	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome W = White Z = Black				

ACCESSORIES : PHOTOS & DRAWINGS

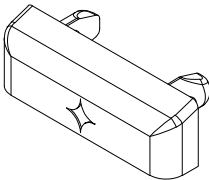
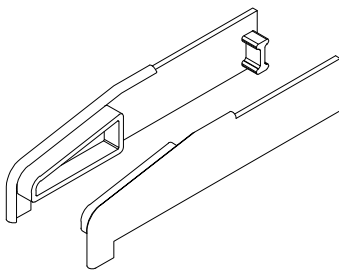
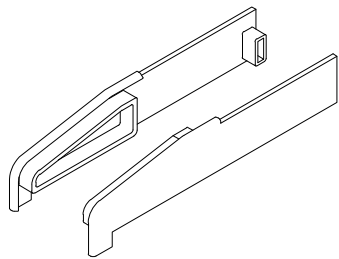
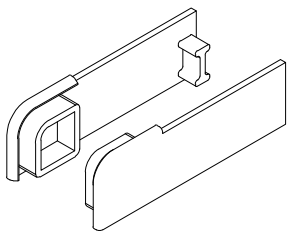
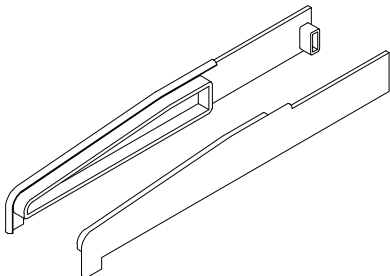
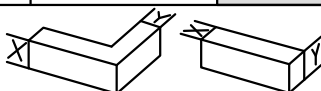
Image	Part Code	Pack	Unit	Application	Colour	
	ACET131 Drainage Cover Cap For colour matched drainage caps, please order ACET432	100	Pack	Outer Frames, Sashes, Transoms & UN3000	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET152 Cill End Cap	10	Pair	ACET452	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET157 Cill End Cap	10	Pair	ETC457	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET178 Cill End Cap	10	Pair	ETC451	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET179N Cill End Cap	10	Pair	ETC479N	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black		

Image	Part Code	Pack	Unit	Application	Colour						
	ACET258 Cill End Cap	10	Pair	ETC458	MF						
					SA						
					KL						
					HP						
					SSC						
					SMC						
					W	✓					
					Z	✓					
					PC						
	ACET311 Stainless Steel Chevron	50	Pack	ETC4101 ETC4105 ETC4110 ETC4111 ETC4112 ETC4113 ETC4114 ETC4115 ETC4116 ETC4117 ETC4120 ETC4124 ETC4146 ETC4147	MF						
					SA						
					KL						
					HP						
					SSC						
					SMC						
					W						
					Z						
					PC						
						ACET352 Pull in Block for Egress Hinges 2 x ACET394 required	50	pack	ETC4124 ETC4125	MF	
										SA	
										KL	
										HP	
										SSC	
SMC											
W											
Z											
PC											
	ACET4026 Crimping Cleat	1	Each	ETC4124 ETC4125	MF	✓					
					SA						
					KL						
					HP						
					SSC						
					SMC						
					W						
					Z						
					PC						
	ACET4027 Crimping Cleat	1	Each	ETC4124 ETC4125	MF	✓					
					SA						
					KL						
					HP						
					SSC						
					SMC						
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black							

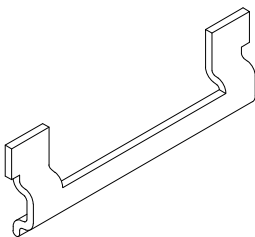
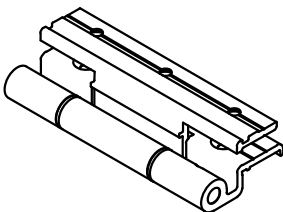
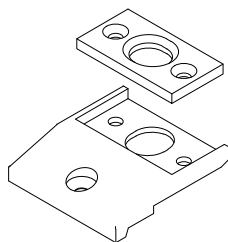
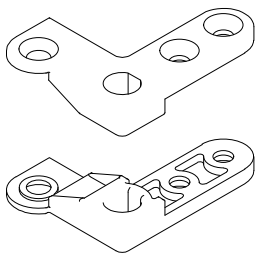
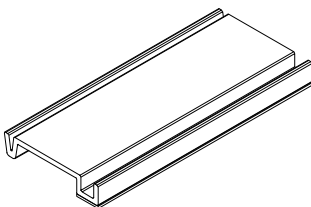
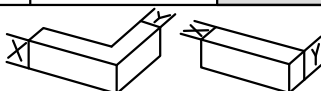
Image	Part Code	Pack	Unit	Application	Colour	
	ACET4036 Anti-Twist Clip	100	Pack	ETC4105 ETC4115 ETC4116 ETC4134 ETC4135 ETC4137	MF	☒
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4050 Butt Hinge	1	Each	ETC4101 ETC4110 ETC4111 ETC4112 ETC4113 ETC4114 ETC4120 ETC4129	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4054 French Casement Keep Kit Kit Contains: 2 x Packers 2 x Reversible Keeps	1	Pack	ETC4138 ACET4055 ACET4138 ACUN3055	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4055 French Casement Shootbolt Guide	1	Pair	ETC4138 ACET4054 ACET4138 ACUN3055	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	☒
					PC	
	ACET4058 Bridge Packer	12	Pack	ETC4129	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black		

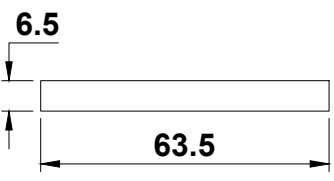
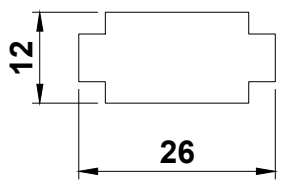
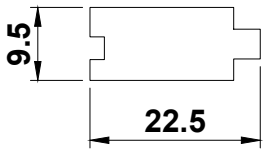
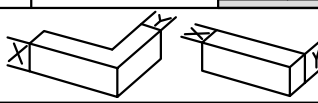
Image	Part Code	Pack	Unit	Application	Colour	
	ACET4067 Non-Locking Espagnolette Handle Silver Anodised	1	Pack	ACET4001 to AET4006	MF	
					SA	✓
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4068 Locking Espagnolette Handle Silver Anodised	1	Pack	ACET4001 to AET4006	MF	
					SA	✓
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4070 Foam	1	Each	ETC4105 ETC4110 ETC4111 ETC4112 ETC4113 ETC4114 ETC4115	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACET4071 Foam	1	Each	ETC4101 ETC4105 ETC4110 ETC4111 ETC4112 ETC4113 ETC4114 ETC4115 ETC4116	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACET4072 Foam	1	Each	ETC4120	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black				

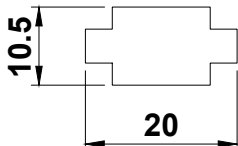
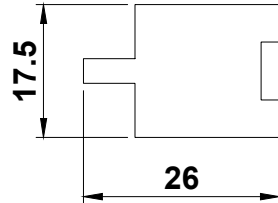
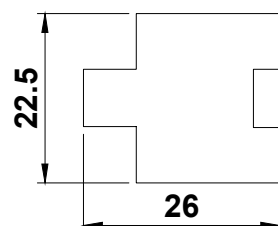
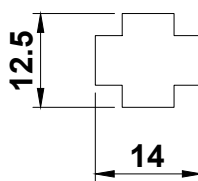
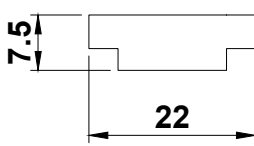
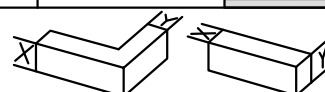
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	ACET4073 Foam	1	Each	ETC4129	MF		
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z	✓	
					PC		
	ACET4075 Foam	1	Each	ETC4130	MF		
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z	✓	
					PC		
	ACET4076 Foam	1	Each	ETC4135	MF		
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z	✓	
					PC		
	ACET4077 Foam	1	Each	ETC4146	MF		
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z	✓	
					PC		
	ACET4078 Foam	1	Each	ETC4147	MF		
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z	✓	
					PC		
 T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black			

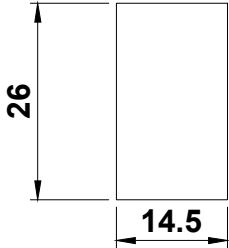
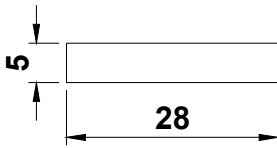
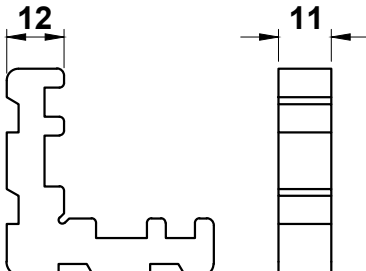
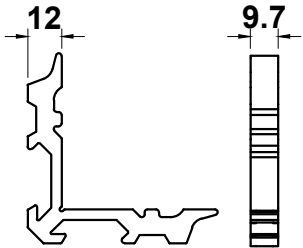
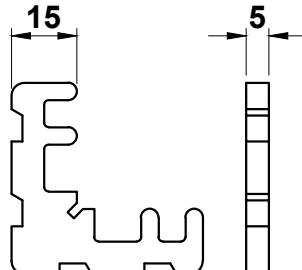
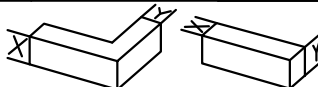
Image	Part Code	Pack	Unit	Application	Colour	
	ACET4081 Foam	1	Each	ETC4129	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACET4082 Foam	1	Each	ETC4110 ETC4111 ETC4112 ETC4113 ETC4115 ETC4120 ETC4130 ETC4135	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACET4110 Crimping Cleat	24	Pack	ETC4110 ETC4111 ETC4112 ETC4113 ETC4115	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4111 Mechanical Cleat	24	Pack	ETC4110 ETC4111 ETC4112 ETC4129	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4115 Crimping Cleat	24	Pack	ETC4115	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black		

Image	Part Code	Pack	Unit	Application	Colour	
	ACET4120 Crimping Cleat	24	Pack	ETC4120	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4122 Crimping Cleat	24	Pack	ETC4146	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4123 Mechanical Cleat	24	Pack	ETC4146	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4124 Crimping Cleat	24	Pack	ETC4147	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4125 Mechanical Cleat	24	Pack	ETC4146	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black				

ACCESSORIES : PHOTOS & DRAWINGS

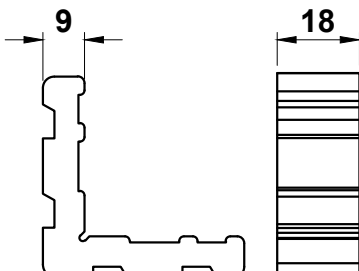
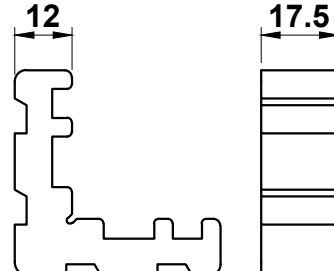
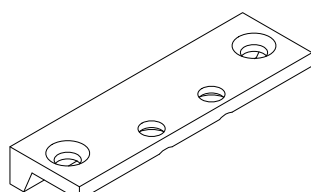
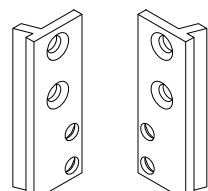
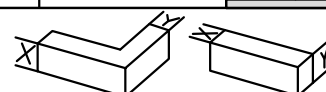
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					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4128 Adhesive Packer	12	Pack	ETC4147	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4129 Crimping Cleat	24	Pack	ETC4129	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4130 Cruciform Block	10	Pack	ETC4130	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4131 Offset Cruciform Block	10	Pairs	ETC4130	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black			

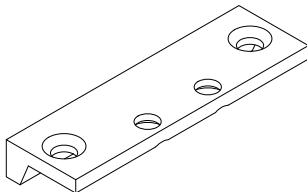
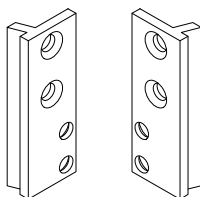
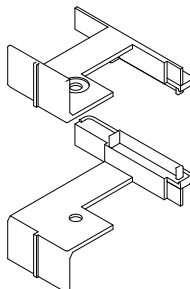
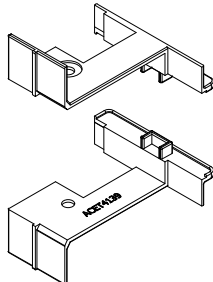
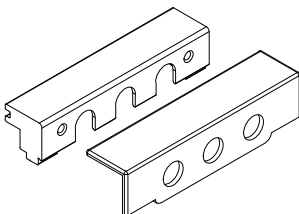
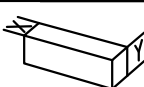
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					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4136 Offset Cruciform Block	10	Pairs	ETC4135	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4138 End Cap	1	Pair	ETC4138 ACET4054 ACET4055 ACUN3050	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET4139 End Cap	1	Pair	ETC4139	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET4165 Cast Handle Block	1	each	ETC4124 UN3160/G	MF	✓
					SA	✓
					KL	✓
					HP	
					SSC	
					SMC	✓
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black		 

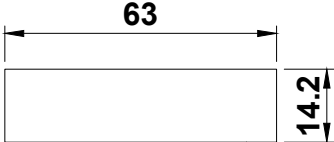
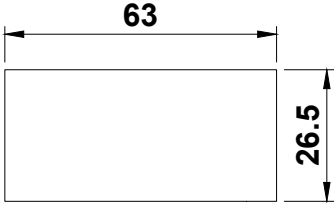
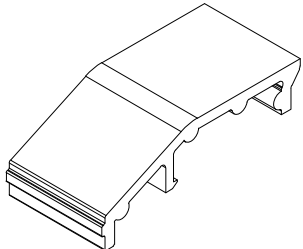
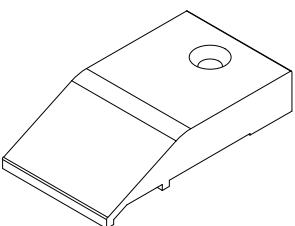
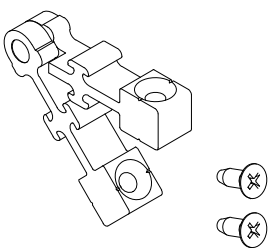
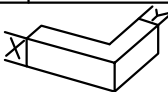
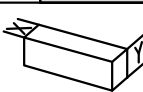
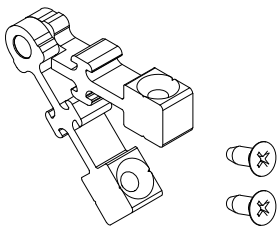
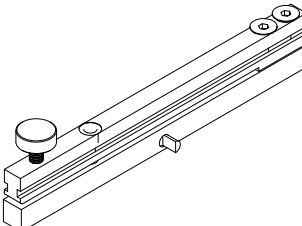
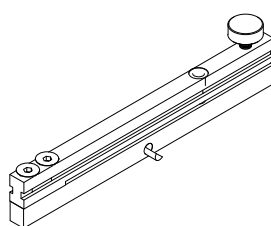
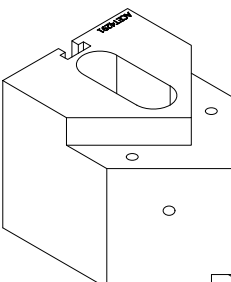
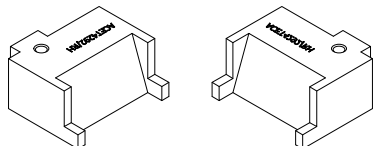
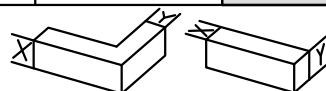
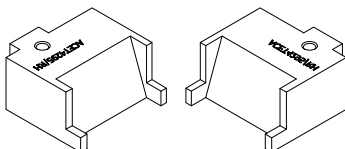
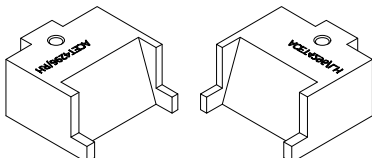
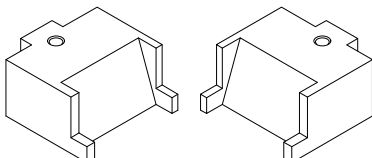
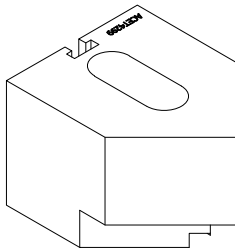
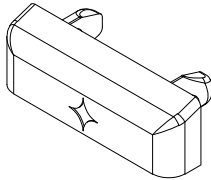
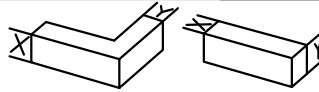
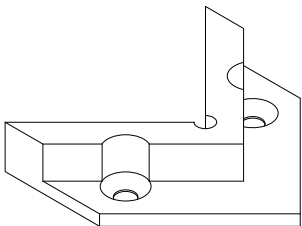
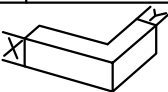
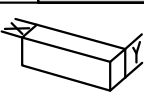
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					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACET4171 Foam	1	Each	ETC4101	MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACET4180 Run-Up Block	100	Pack	Outer Frames & Transoms/ Mullions	MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACET4181 Run-Up Block	100	Pack	ETC4146	MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACET4200 Variable Angle Cleat with screws	24	Pack	ETC4110 ETC4111 ETC4112 ETC4113	MF
					SA
					KL
					HP
					SSC
					SMC
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black	 	

Image	Part Code	Pack	Unit	Application	Colour
	ACET4201 Variable Angle Cleat with screws	24	Pack	ETC4110 ETC4111 ETC4112 ETC4113	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4208 Jig for Variable Angle Cleat for ACET4200	1	Each	ETC4110 ETC4111 ETC4112 ETC4113	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4209 Jig for Variable Angle Cleat for ACET4201	1	Each	ETC4110 ETC4111 ETC4112 ETC4113	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4291N Vee Block	1	Each	ETC4110 ETC4112 ETC4115 ETC4120 ETC4146 ETC4147	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4292 Punches	1	Each	ETC4110 ETC4111 ETC4112 ETC4113	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black		

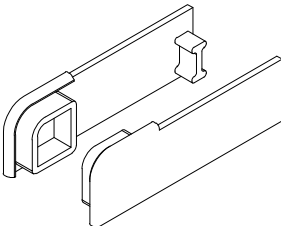
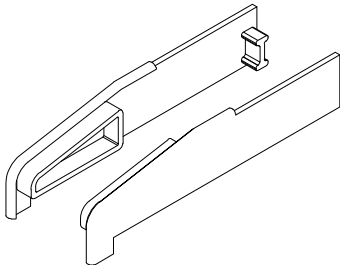
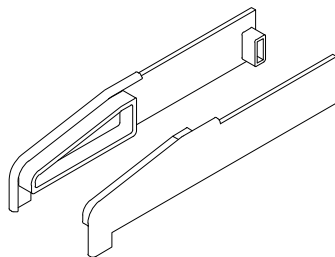
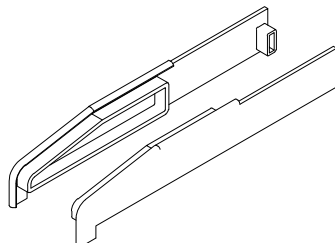
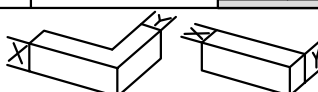
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACET4295 Punches	1	Each	ETC4115 ETC4120	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4296 Punches	1	Each	ETC4129 ETC4146 ETC4147	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4298 Punches	1	Each	ETC4124 ETC4125	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET4299 Vee Block	1	Each	ETC4129	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET432 Drainage Cover Cap (Colour Match)	8	Pack	Outer Frames, Sashes, Transoms & UN3000	MF	
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome				

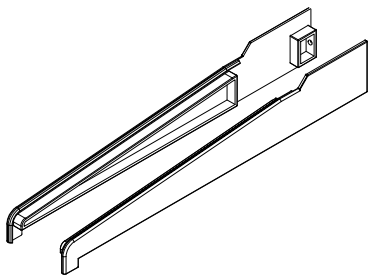
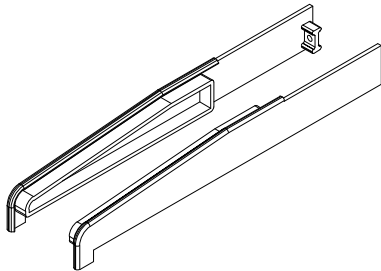
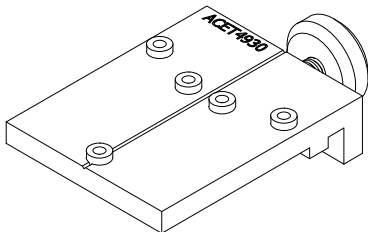
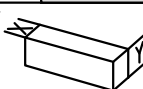
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
	ACET4397 3mm Vee Block Packer	1	Each	ETC4124	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4380 8mm Crimping Support	1	Each	ACET4382 ACET4383 ACET4384	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4381 10mm Crimping Support	1	Each	ACET4382 ACET4383 ACET4384	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4382 14.5mm Crimping Support	1	Each	ETC4115G ETC4116G	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACET4383 22.5mm Crimping Support	1	Each	ETC4110G ETC4111G ETC4112G ETC4124G ETC4125G ETC4129G	MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black	 	

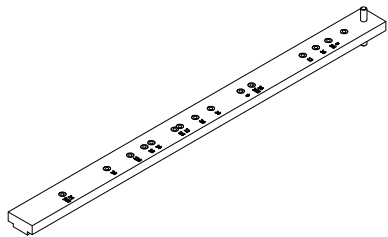
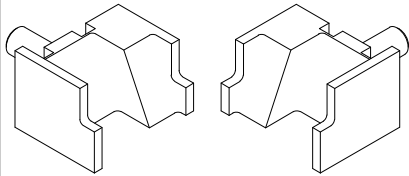
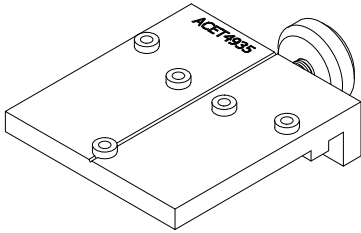
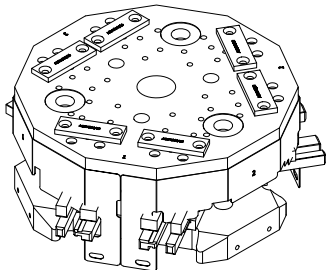
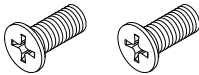
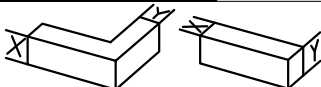
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACET4384 25.5mm Crimping Support	1	Each	ETC4120G	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET451 Cill End Cap	1	Pair	ETC451	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET452 Cill End Cap	1	Pair	ETC452	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET457 Cill End Cap	1	Pair	ETC457	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET458 Cill End Cap	1	Pair	ETC458	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
 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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black		

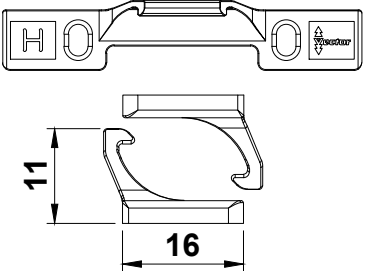
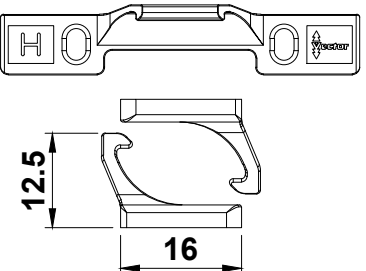
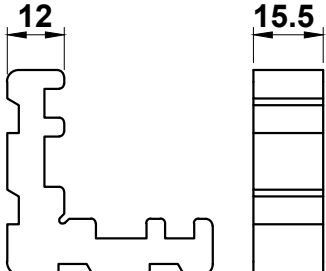
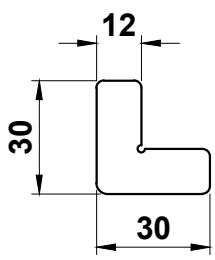
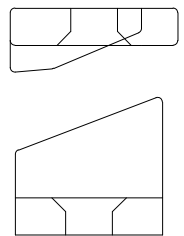
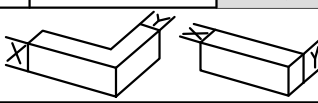
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACET460 Inline Espag Handle with 9mm Spindle	1	Each	ACET4001 to AET4006	MF	
					SA	
					KL	✓
					HP	✓
					SSC	✓
					SMC	✓
					W	✓
					Z	✓
					PC	✓
	ACET465 Cranked Espag Handle with 9mm Spindle	1	Each	ACET4001 to AET4006	MF	
					SA	
					KL	✓
					HP	✓
					SSC	✓
					SMC	✓
					W	✓
					Z	✓
					PC	✓
	ACET477 Cill End Cap	1	Pair	ETC477	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET479N Cill End Cap	1	Pair	ETC479N	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET4930 Drill Jig	1	Pair	ACET4130 ETC4130	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		 		
		W = White Z = Black				

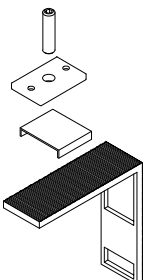
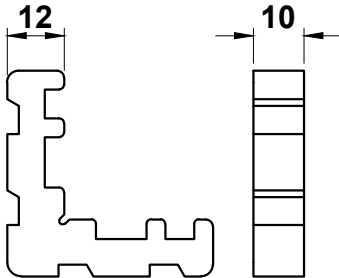
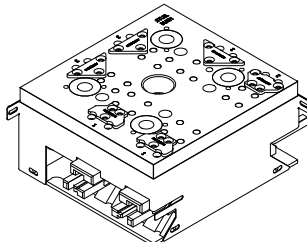
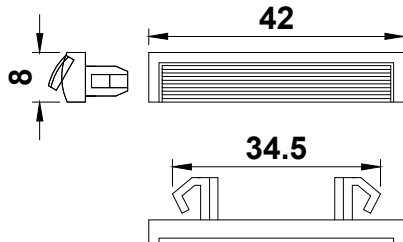
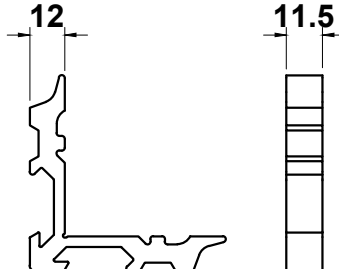
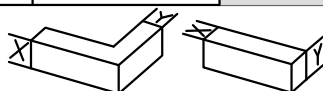
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour				
	ACET4904 Drill Jig	1	Eack	ACETME16	MF	✓			
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACET4917 Punches	1	Pair	ETC4117	MF				
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACET4935 Drill Jig	1	Pair	ACET4135 ETC4135	MF	✓			
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACET4950 Punch Tool	1	Each	ETC4110 ETC4111 ETC4112 ETC4113 ETC4129 ETC4146	MF				
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACET495 Handle Fixing Kit 1 Pack Contains: 2No. 5 x 12 SS CSK Machine Screws	1	Pack	ACET460 ACET465	MF	✓			
					SA				
					KL				
					HP				
					SSC				
					SMC				
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black	

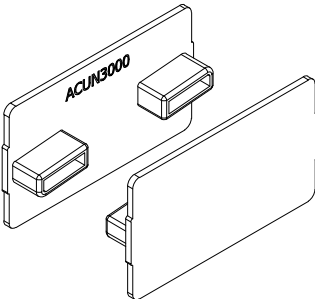
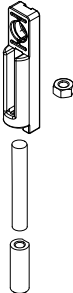
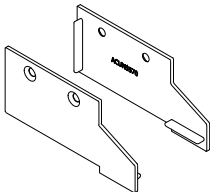
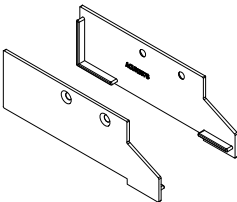
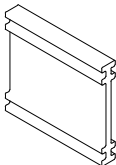
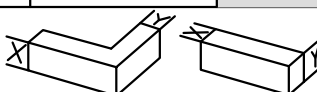
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACET513 13mm Cavity Hinge Protector 4 Per Set (2 pairs)	50	Sets	ETC4124 ETC4125	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET516 16mm Cavity Hinge Protector 4 Per Set (2 pairs)	50	Sets	ETC4120 ETC4129	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET615 Crimping Cleat	24	Pack	ETC4146	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET624 Stainless Steel Chevron	100	Pack	ETC4120 ETC4129	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET652 Pull-In Blocks	50	Pack	ETC4120 ETC4129	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			

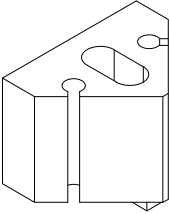
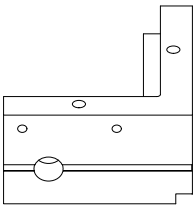
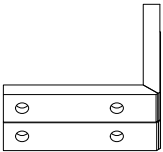
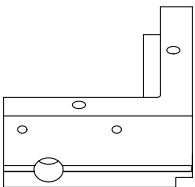
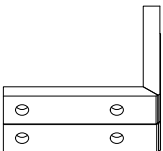
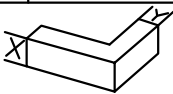
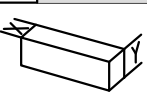
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACET695 Glass Adjuster Kit Kit Includes: 1 x Adjusting Screw 1 x Threaded Block 1 x Steel Cover 1 x ABS Corner	1	Kit	ETC4129	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET820 Crimping Cleat	24	Pack	ETC4110 ETC4111 ETC4112 ETC4113 ETC4120 ETC4129	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET963R Punch Tool	1	Each	ETC4110 ETC4111 ETC4112 ETC4113 ETC4129 ETC4146	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACGSL045 Drainage Cap	100	Pack		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACSL013B Mechanical Cleat	24	Pack	ETC4110 ETC4111 ETC4112 ETC4115	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
 	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black				

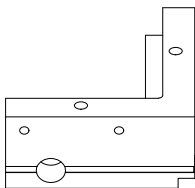
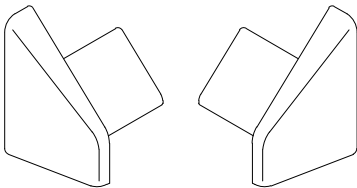
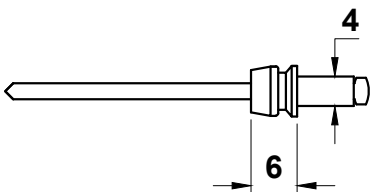
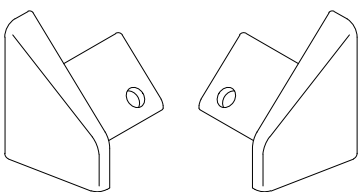
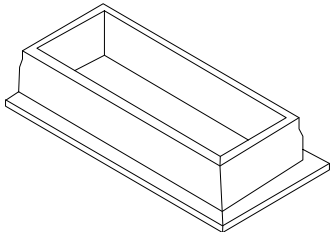
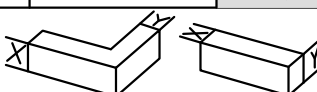
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACUN3000 End Caps for UN3000	10	Pairs	UN3000	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3055 French Casement Shootbolt Kit Includes: 2 x Cam connectors 2 x 180mm SS threaded bar 2 x Stainless Steel Shootbolt 2 x M8 Nuts	1	Kit	ETC4138 ACET4054 ACET4055 ACET4138	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3570 UN3570 End Caps	1	Pair	UN3570	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3578 UN3577 End Caps	1	Pair	UN3577	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3701 Anti-Crush Support	25	Pack	UN3570	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black	

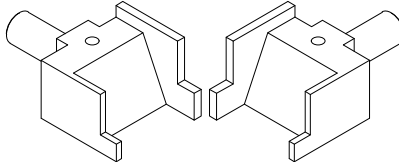
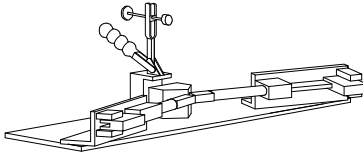
ACCESSORIES : PHOTOS & DRAWINGS

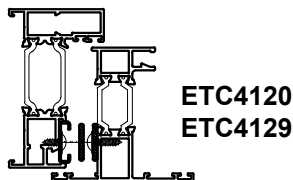
Image	Part Code	Pack	Unit	Application	Colour	
	ACUN3950 Vee Block	1	Each	ACUN3951 ACUN3952 ACUN3953 'G' Profiles	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3951 ACUN3950 Faceplate	1	Each	ACUN3950 ACUN3952 'G' Profiles (not ETC4129)	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3952 ACUN3950 Nylon Support	1	Each	ACUN3950 ACUN3951 ACUN3953 'G' Profiles	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3953 ACUN3950 Faceplate	1	Each	ACUN3950 ACUN3952 ACUN3953 ETC4129G	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3957 Adjustable Vee Block	1	Each	ACUN3950 ACUN3958 ETC4120G ETC4124G ETC4125G 'G' Profiles	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
 T-BARS ACVG65=2.5mm ACVG68=3.0mm ACVL150=4.0mm		 Screw (Grub)		 		
MF = Mill Finish		W = White				
SA = Silver Anodised		Z = Black				
KL = Basic Colour						
HP = Special Colour						
SSC = Smooth Satin Chrome						
SMC = Smokey Chrome						
PC = Polished Chrome						

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour				
	ACUN3958 ACUN3950 Nylon Packer	1	Each	ACUN3950 ACUN3957 ETC4124G ETC4125G	MF				
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACVL059 End Cap	1	Pair	VL72	MF				
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACVL061 Rivet	100	Pack	VL72	MF				
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACVL072 Cast End Cap	1	Pair	VL72	MF				
					SA				
					KL				
					HP				
					SSC				
					SMC				
					W				
					Z				
					PC				
	ACVL635 PVC End Cap	1	each	ETC4136	MF				
					SA				
					KL				
					HP				
					SSC				
					SMC				
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black			

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	ACW909 Punches	1	Pair	ETC4124	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	WUT024HSZA Manual Crimper Note: Vee Blocks & Punches are Sold Separately	1	Each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
					MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
					MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
 T-BARS ACVG65=2.5mm ACVG68=3.0mm ACVL150=4.0mm  Screw (Grub)	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome				MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
		W = White Z = Black		 		



Friction Hinge Stays 16mm Stack (Standard)

Top Hung Windows

Top Hung	Type of Hinge / Stay	Max. Vent	Height		Opening Angle (+/- 2.5°)
		Weight (kgs)	Minimum	Maximum	
ACETDHS08	Standard	12	200	350	65°
ACETDHS10		16	275	400	80°
ACETDHS12		20	350	550	80°
ACETDHS16		21	500	780	80°
ACETDHS20		26	700	1100	50°
ACETDHS24		40	850	1300	37.5°
ACETDTH24	Heavy Duty	50	850	1500	32°
ACETDHS12R	Restricted	20	350	550	14° / 65°
ACETDHS16R		21	500	780	10° / 59°
ACETDHS20R		26	700	1100	8° / 50°
ACETDHS24R		40	850	1300	7° / 37.5°

Side Hung Windows

Side Hung	Type of Hinge / Stay	Max. Vent	Width ('A')		Opening Angle (+/- 2.5°)
		Weight (kgs)	Minimum	Maximum	
ACETDHSSH12	Standard	22	300	600	60°
ACETDHSSH16		24	400	600	60°
ACETSH1612L ACETSH1612R	Restricted Left Hand R/H Non-Restricted Right Hand L/H Non-Restricted	22	300	600	13°/58°
ACETSH1616L ACETSH1616R	VIEWED FROM OUTSIDE L/H Restricted R/H Restricted	24	400	600	11°/58°
ACETME16	Egress *use with ACET652 pull in blocks	40	365	865	90°
ACETDSH16	Heavy Duty	40	400	1000	60°

Note1: Vent Height / Width is measured in mm from rebate to rebate (not overall size or outer frame)

Note2: Top hung height and side hung width sizes to be reduced by 2mm where size is 450mm or smaller

Note3: Typical Dimensions based on Max. Size and Glass 30kg/metre

Note4: For additional security use ACET516 hinge protectors

Note5: Kitemark specification covers Top Hung Max. height up to 1400mm.

Note6: For sashes over 600mm, ACETME99 is recommended for ACETME16 to disable easy clean function



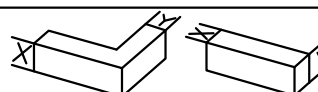
T-BARS
ACVG65=2.5mm
ACVG66=3.0mm
ACVL150=4.0mm



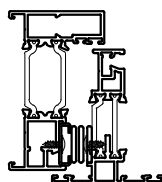
Screw (Grub)

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

W = White
Z = Black



13mm Stack Friction Hinge Stays



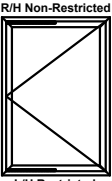
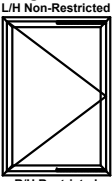
ETC4124
ETC4125

Friction Hinge Stays 13mm Stack (Standard)

Top Hung Windows

Top Hung	Type of Hinge / Stay	Max. Vent	Height ('A')		Opening Angle (+/- 2.5°)
		Weight (kgs)	Minimum	Maximum	
ACINDS10	Standard	16	275	400	80°
ACINDS16		21	400	780	80°
ACINDS20		26	700	1100	50°
ACINDS24		40	850	1300	37.5°
ACINDP24	Heavy Duty	50	850	1500	32°
ACINDA10	Austenitic	16	275	400	80°
ACINDA16		21	400	780	80°
ACINDA20		26	700	1100	50°
ACINDA24		40	850	1300	37.5°
ACINDR12	Restricted	20	350	550	14°/65°
ACINDR16		21	500	780	10°/59°
ACINDR20		26	700	1100	8°/50°
ACINDR24		40	850	1300	7°/37.5°

Side Hung Windows

Side Hung	Type of Hinge / Stay	Max. Vent	Width ('A')		Opening Angle (+/- 2.5°)
		Weight (kgs)	Minimum	Maximum	
ACINDSSH12	Standard	22	300	600	60°
ACINDSSH16		24	400	600	60°
ACINDASH12	Austenitic	22	300	600	60°
ACINDASH16		24	400	600	60°
ACETSH1312L ACETSH1312R	Restricted Left Hand R/H Non-Restricted  L/H Restricted	22	300	600	13°/58°
ACETSH1316L ACETSH1316R	Restricted Right Hand L/H Non-Restricted  R/H Restricted	24	400	600	11°/58°
ACETME13	Egress *use with ACET352 pull in blocks	40	365	865	90°

Note1: Vent Height / Width is measured in mm from rebate to rebate (not overall size or outer frame)

Note2: Top hung height and side hung width sizes to be reduced by 2mm where size is 450mm or smaller

Note3: Typical Dimensions based on Max. Size and Glass 30kg/metre

Note4: For additional security use ACET513 hinge protectors

Note5: Kitemark specification covers Top Hung Max. height up to 1400mm. ACINDP24 Max. height is 1500mm

Note6: For sashes over 600mm, ACETME99 is recommended for ACETME13 to disable easy clean function



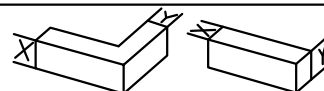
T-BARS
ACVG65=2.5mm
ACVG66=3.0mm
ACVL150=4.0mm



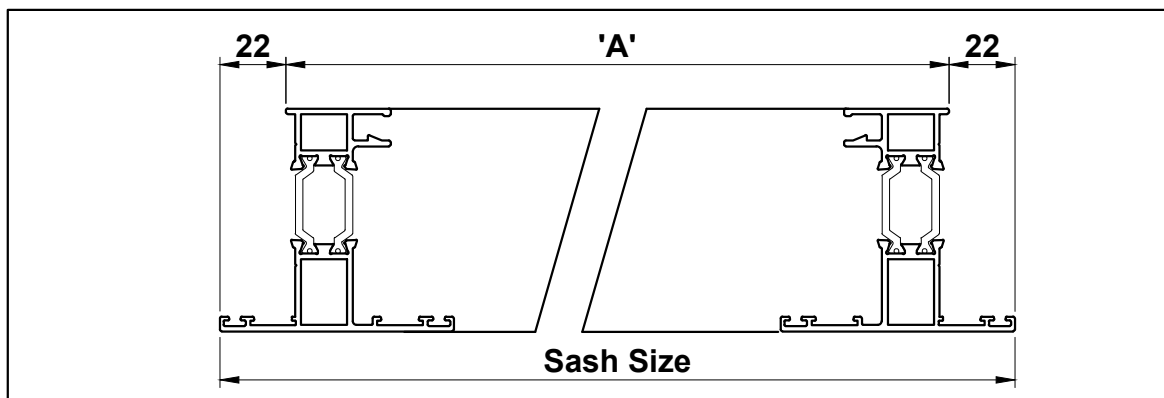
Screw (Grub)

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

W = White
Z = Black



Reverse Espag Locking



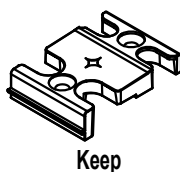
Part Code	Rod Length (mm)	Number of Keeps	Sash Rebate Size ('A')		Pack QTY
			Minimum	Maximum	
ACET4001L	359	2	364	509	20
ACET4001R					
ACET4002L	505	2	510	759	20
ACET4002R					
ACET4003L	755	2	760	1009	20
ACET4003R					
ACET4004L	1005	4	1010	1259	20
ACET4004R					
ACET4005L	1255	4	1260	1400	20
ACET4005R					

Note: To Suit Handles with 7mm x 7mm spindle

Cam Locking Direction



Cam Locking Direction



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
SSC = Smooth Satin Chrome
SMC = Smokey Chrome
PC = Polished Chrome

W = White
Z = Black

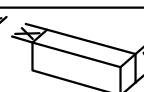


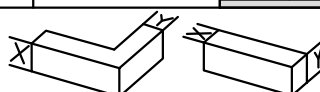
Image	Part Code	Pack	Unit	Application	Colour	
	ACMX09761 Maxi Gloss	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09762 Alu. Bright	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09763 Teflon Spray	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09764 Maxi Clean	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09765 Alu. Cleaner	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black		

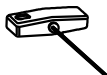
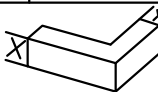
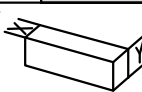
Image	Part Code	Pack	Unit	Application	Colour
	ACMX09770 Roll & Wrap 100mm	1	each		MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACMX09775 Grip Handwrap	1	each		MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACMX09801 Protective Tape 50mm	1	each		MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACMX09802 Protective Tape 70mm	1	each		MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACMX09803 Protective Tape 100mm	1	each		MF
					SA
					KL
					HP
					SSC
					SMC
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black	 	

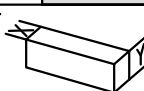
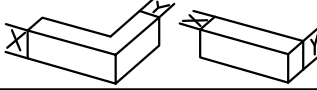
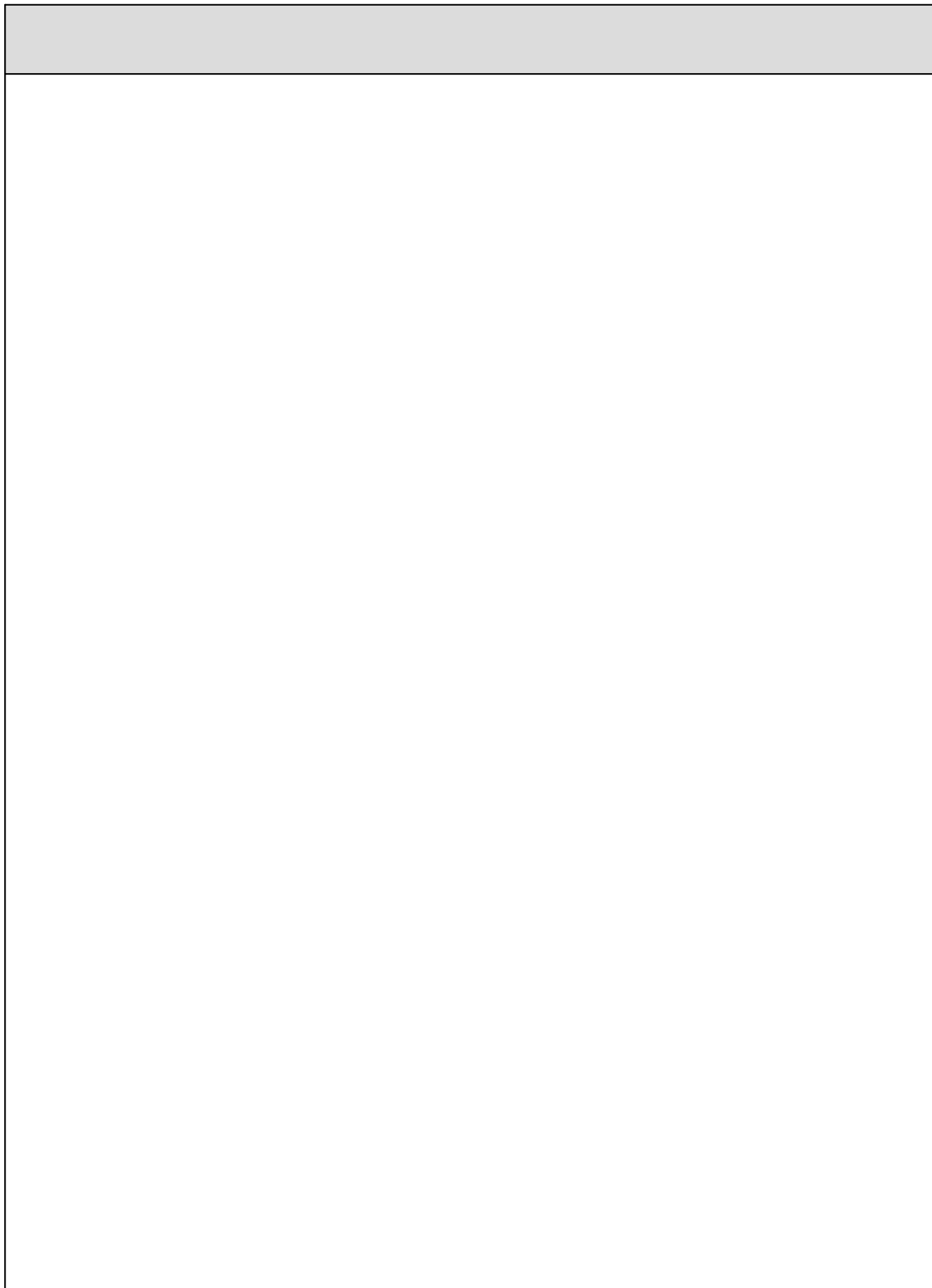
Image	Part Code	Pack	Unit	Application	Colour	
	ACMX09830 Rubber Sealant	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACSIL04 Sealing Glue Order with suffix of KL colour (eg.ACSIL04KL005) or BL=Black/WP=White/ CL=Clear	1	each		MF	
					SA	
					KL	✓
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACSIL08 Silicon Gun	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACSIL013 Glue for Mitre	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACSIL014 Anti-Corrosion Coating	1	each		MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome		W = White Z = Black	 	

Image	Part Code	Pack	Unit	Application	Colour	
	ACUN3900 Gasket Roller	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
					MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
					MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
					MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					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 SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black				

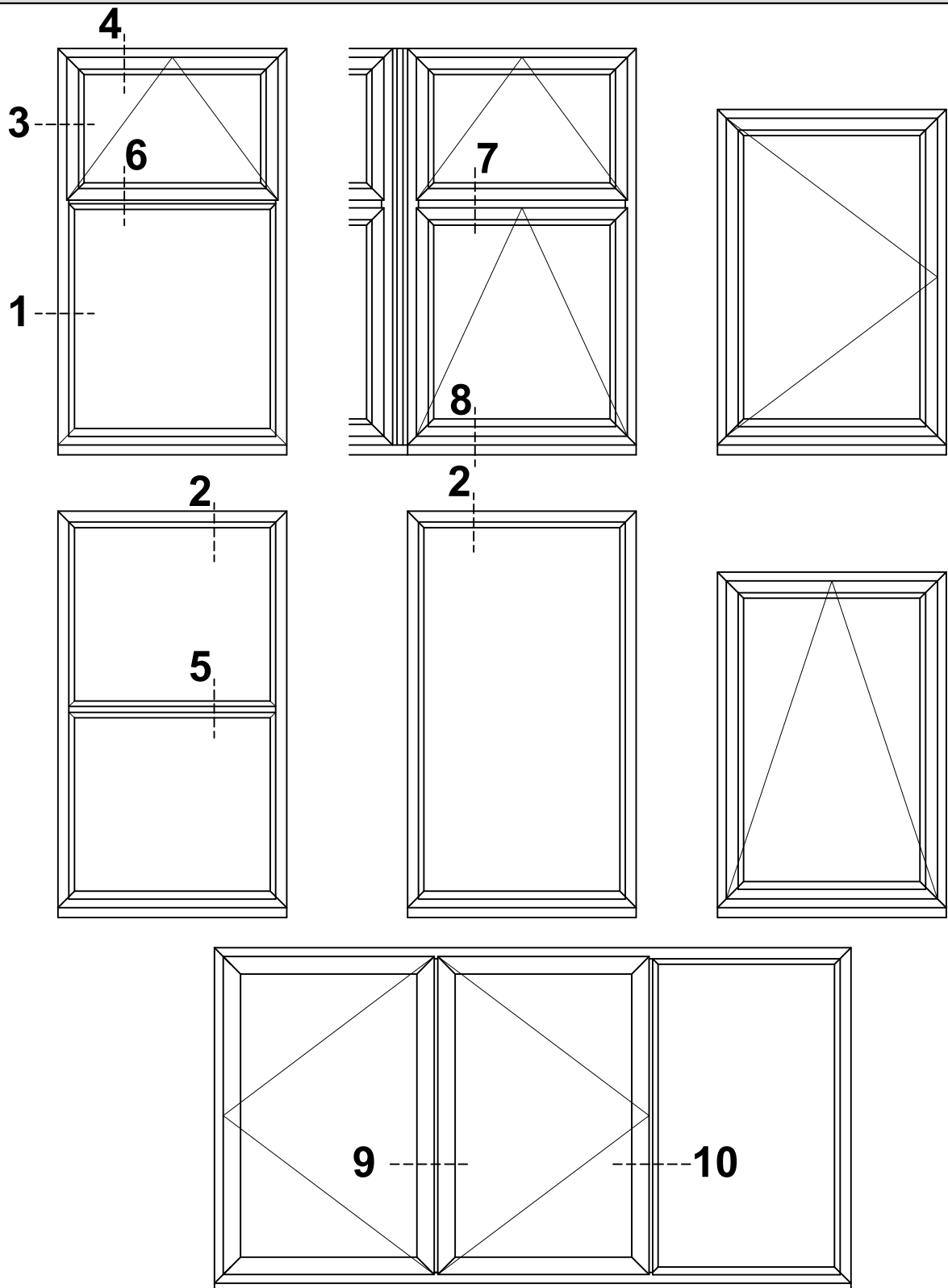
Section C

Sections

Scale Elevations

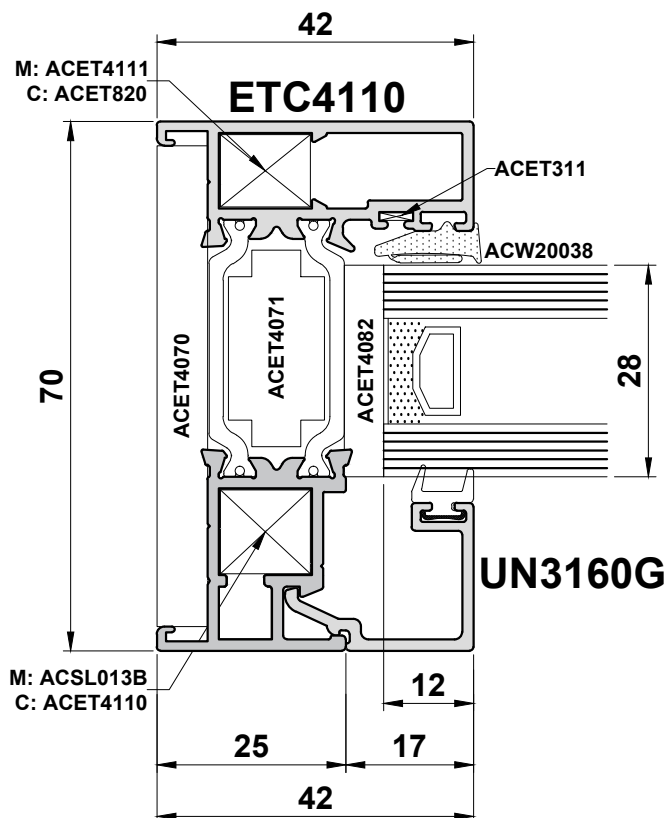
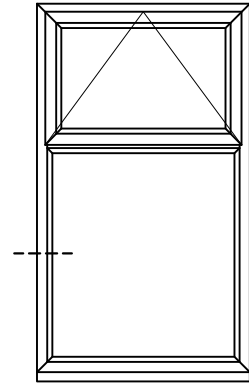


Standard Casement Detail



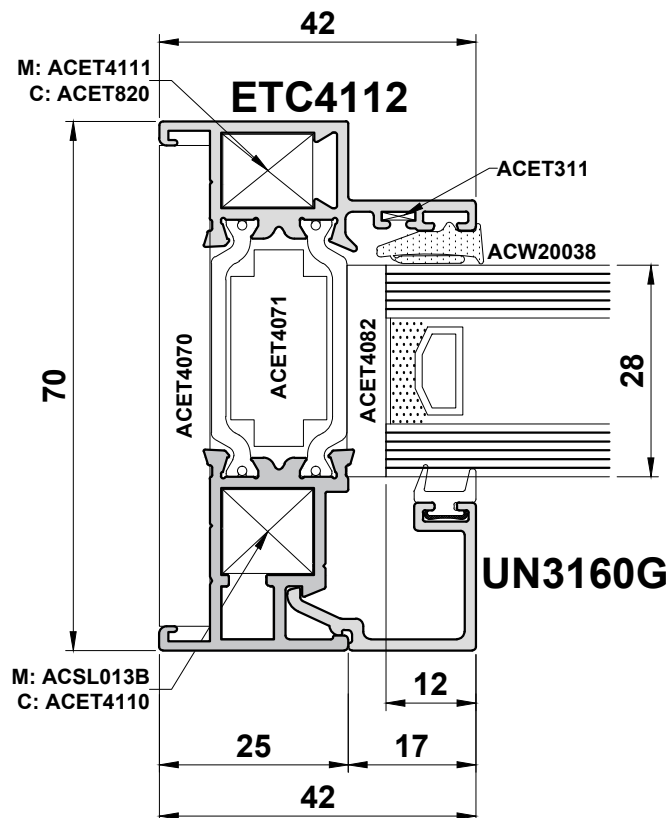
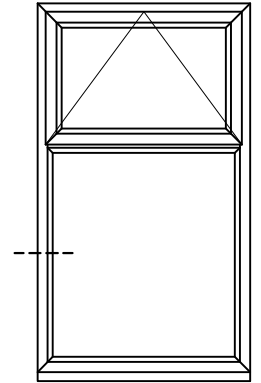
Do Not Scale From This Drawing

Detail 1A



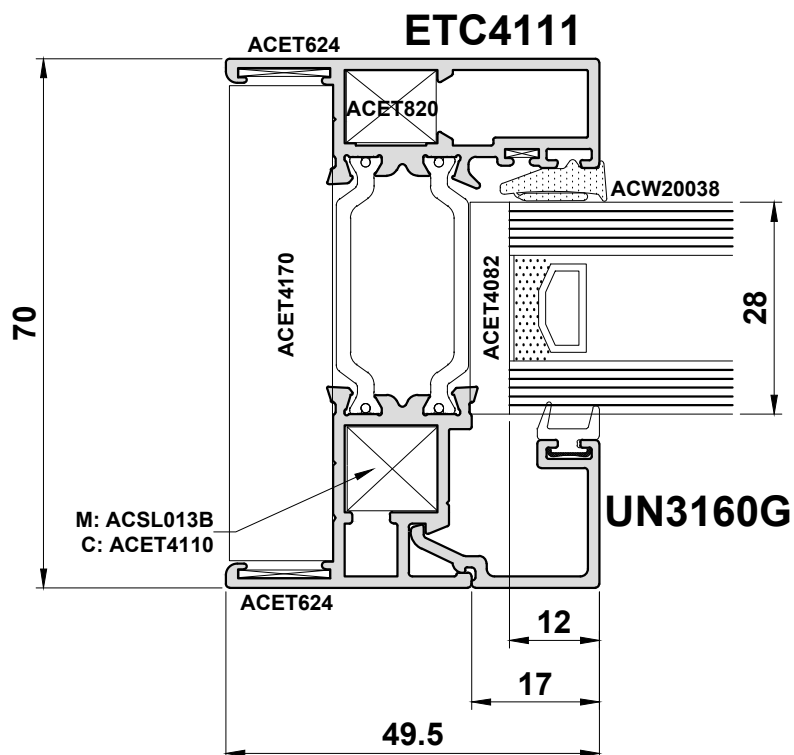
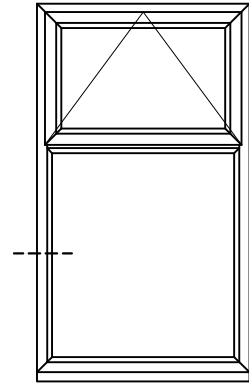
Do Not Scale From This Drawing

Detail 1B



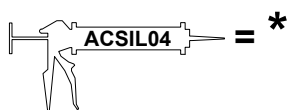
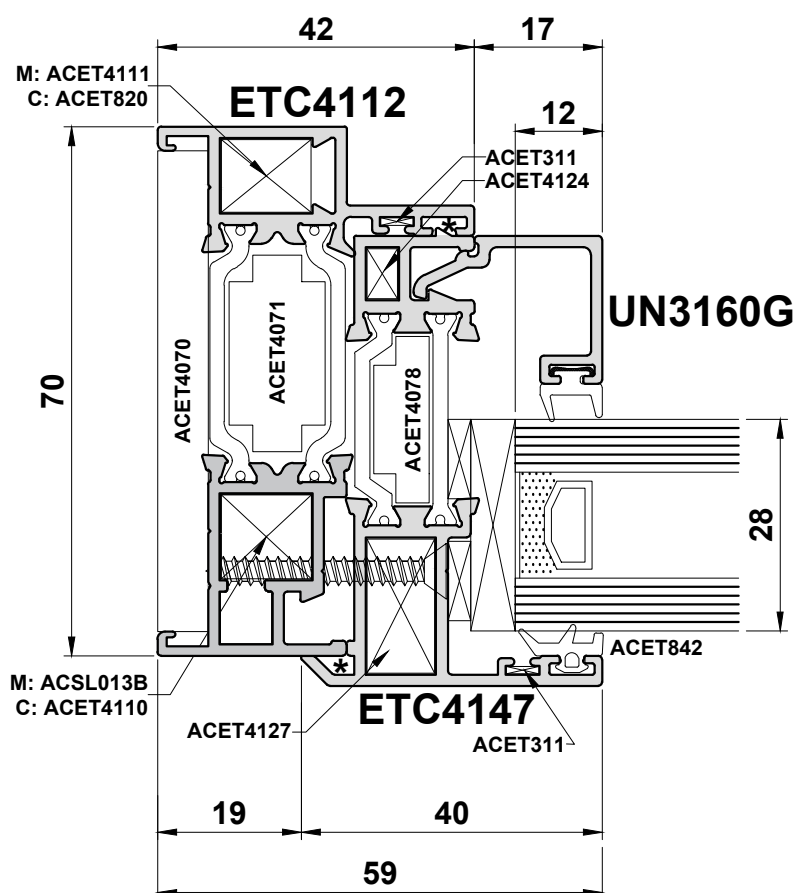
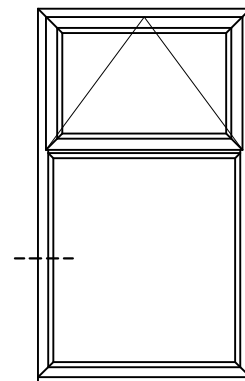
Do Not Scale From This Drawing

Detail 1C



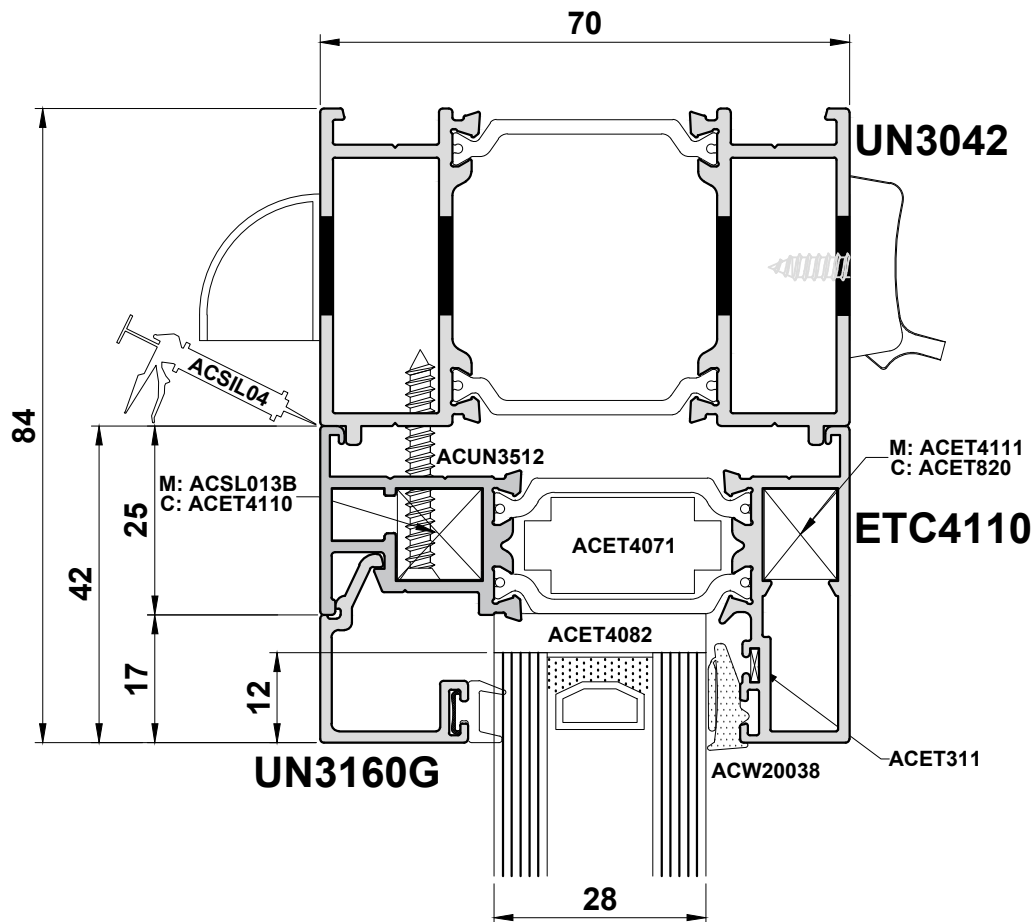
Do Not Scale From This Drawing

Detail 1D



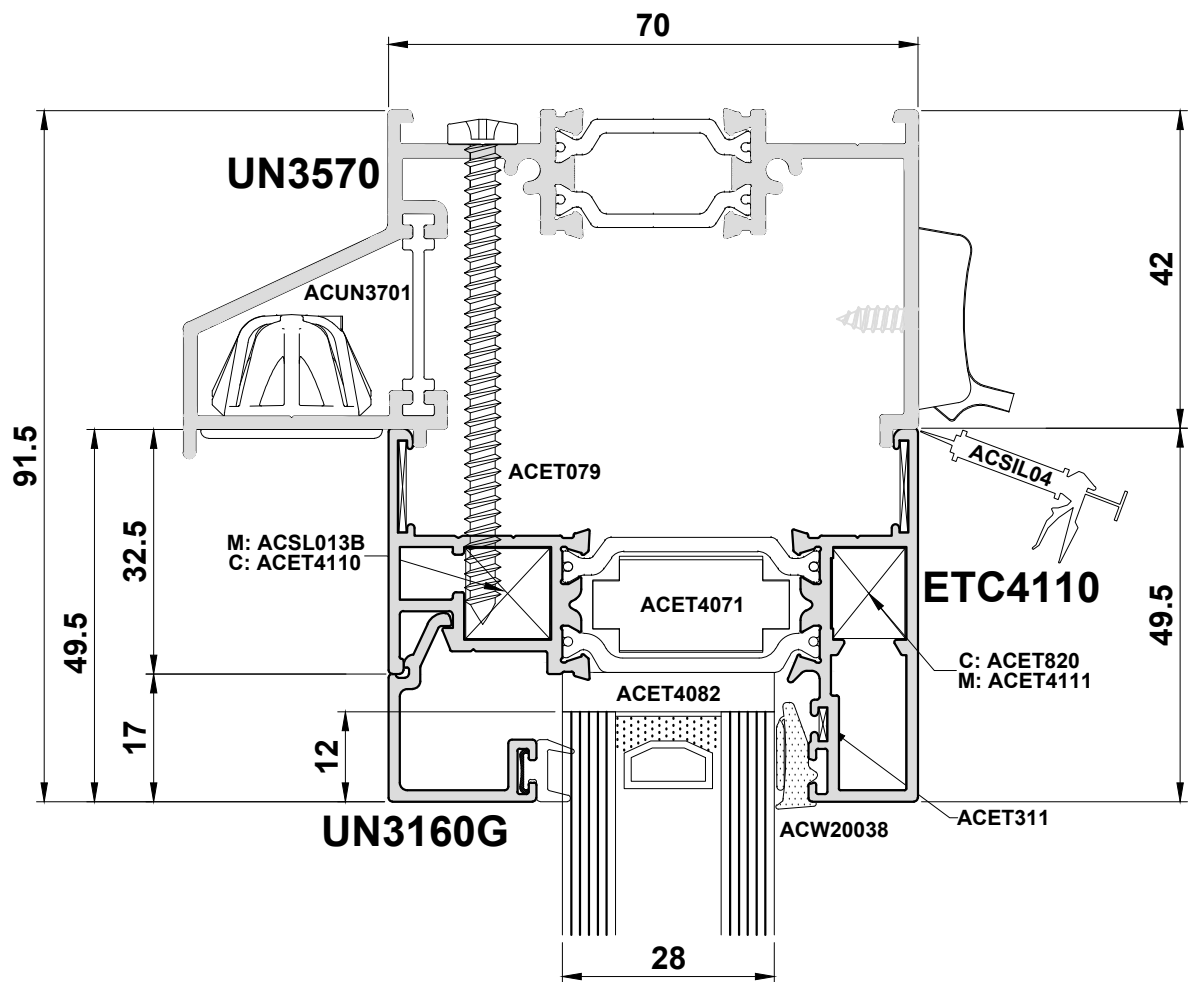
Do Not Scale From This Drawing

Detail 2A



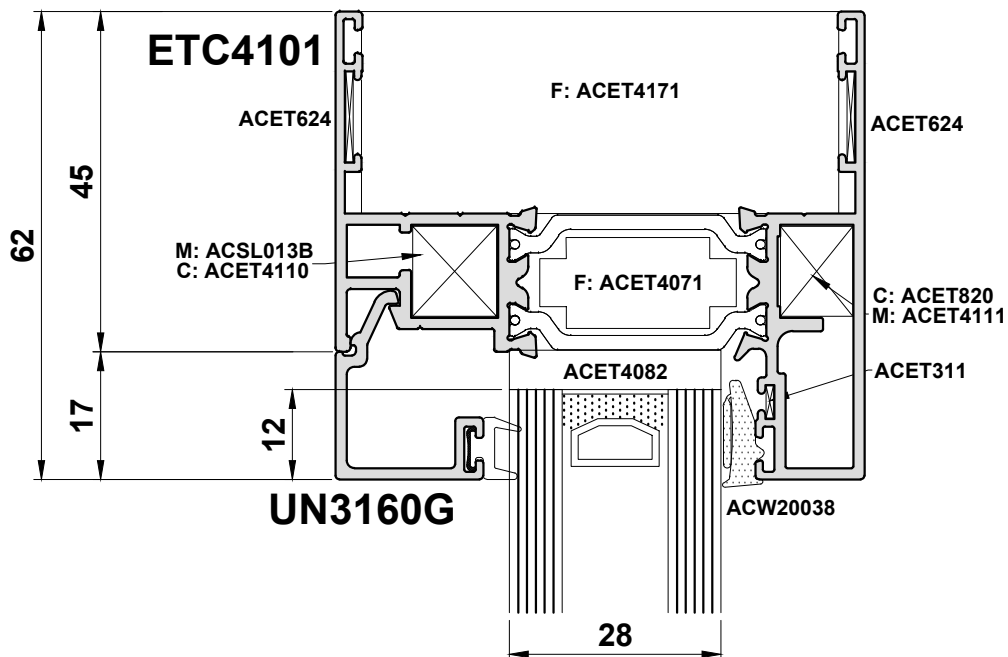
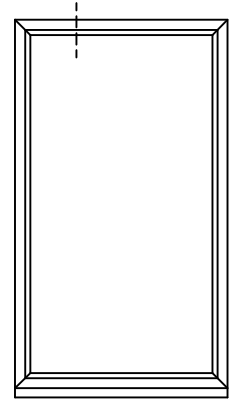
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Detail 2B



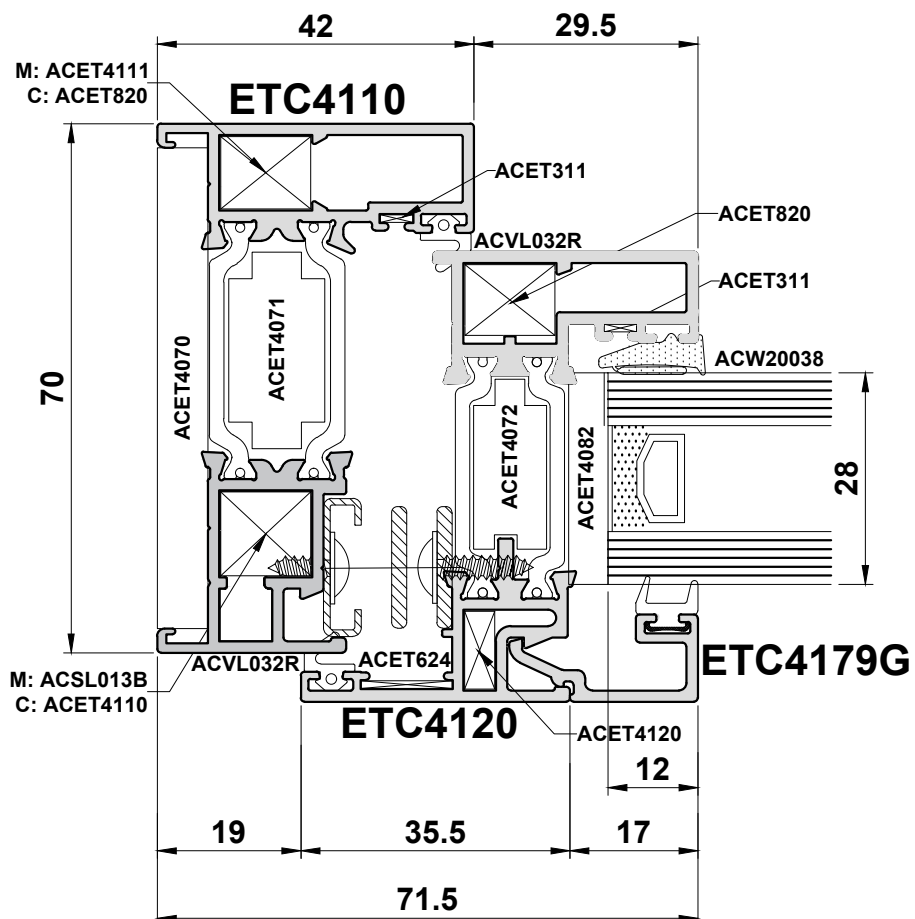
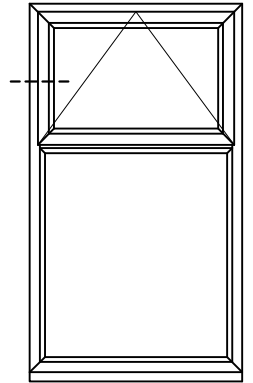
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Detail 2C



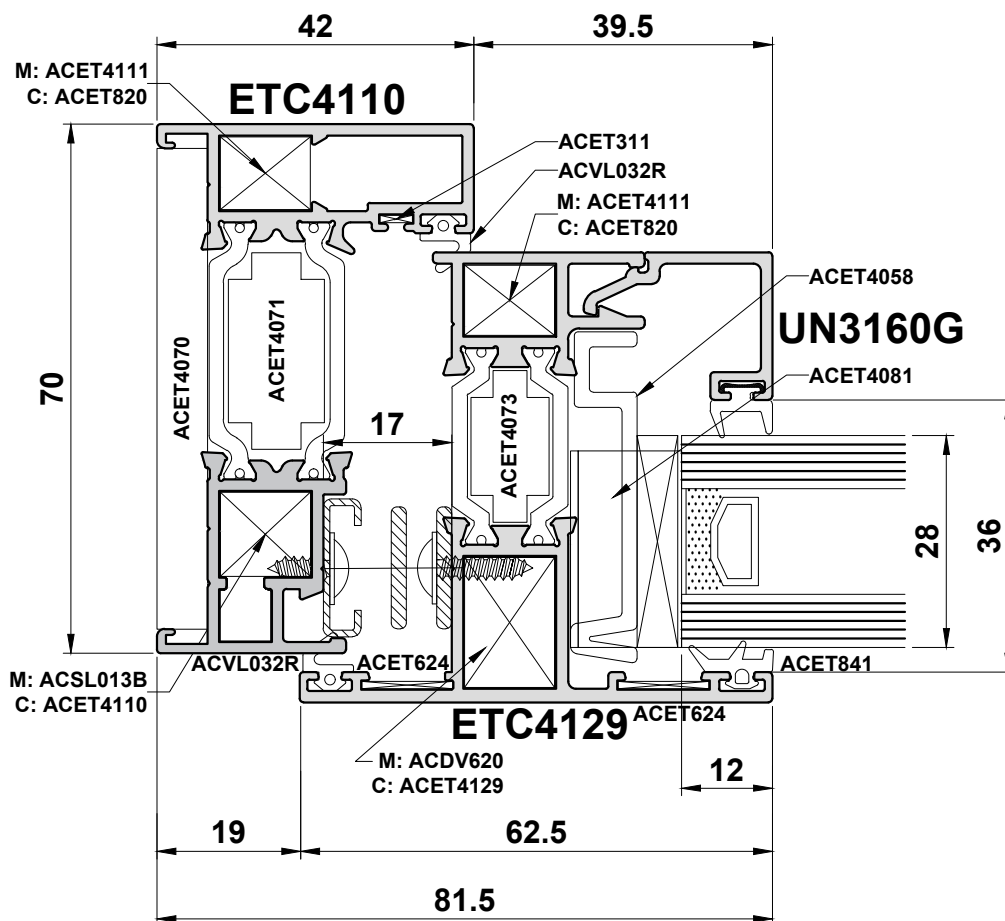
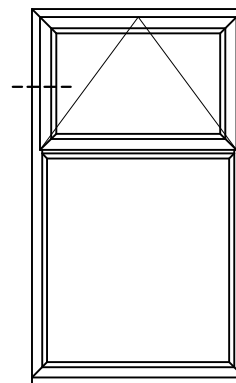
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Detail 3A



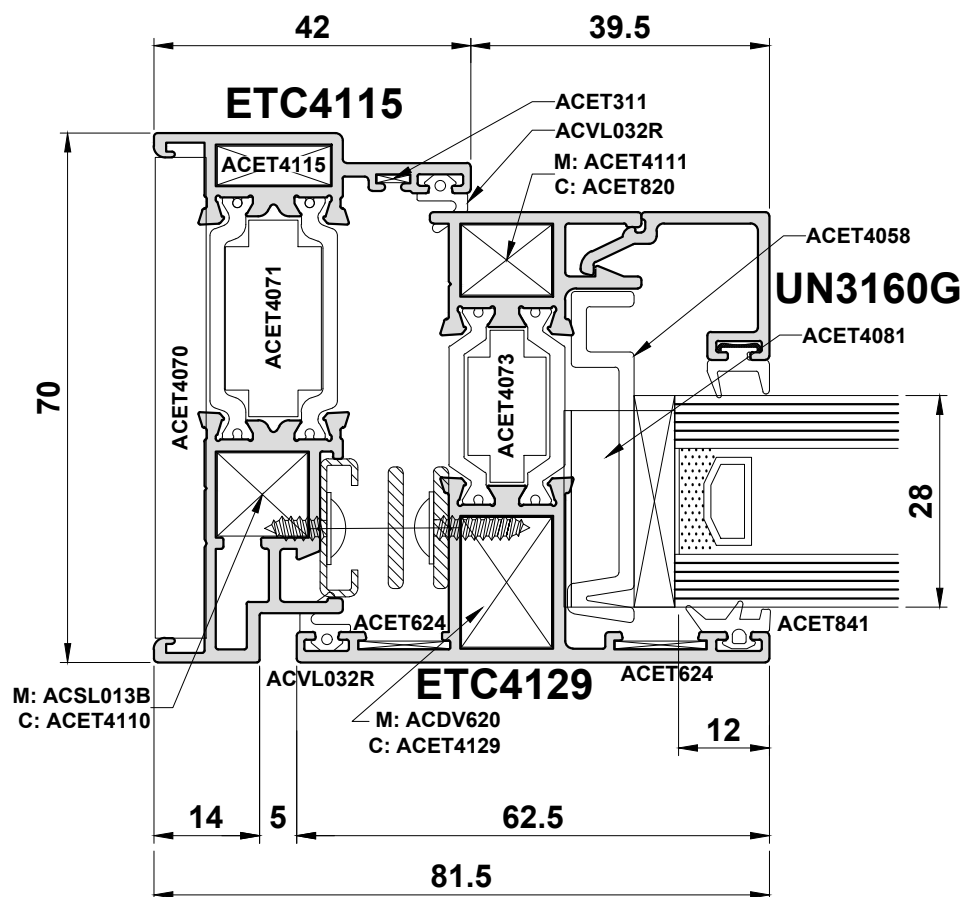
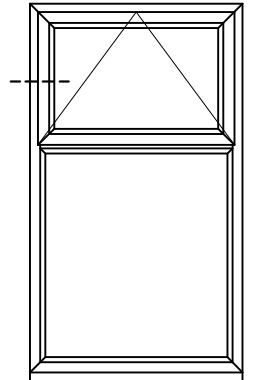
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Detail 3B



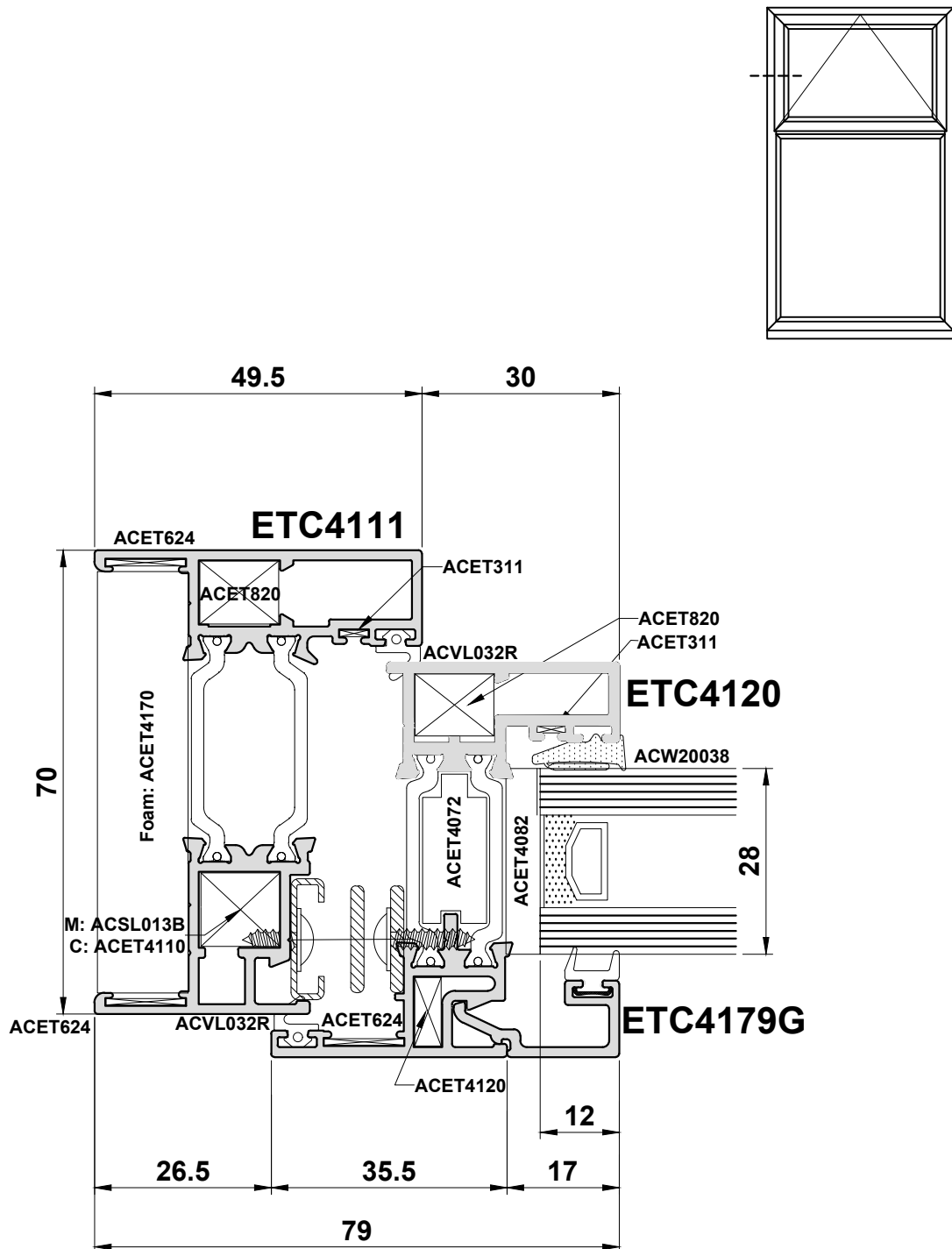
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Detail 3C



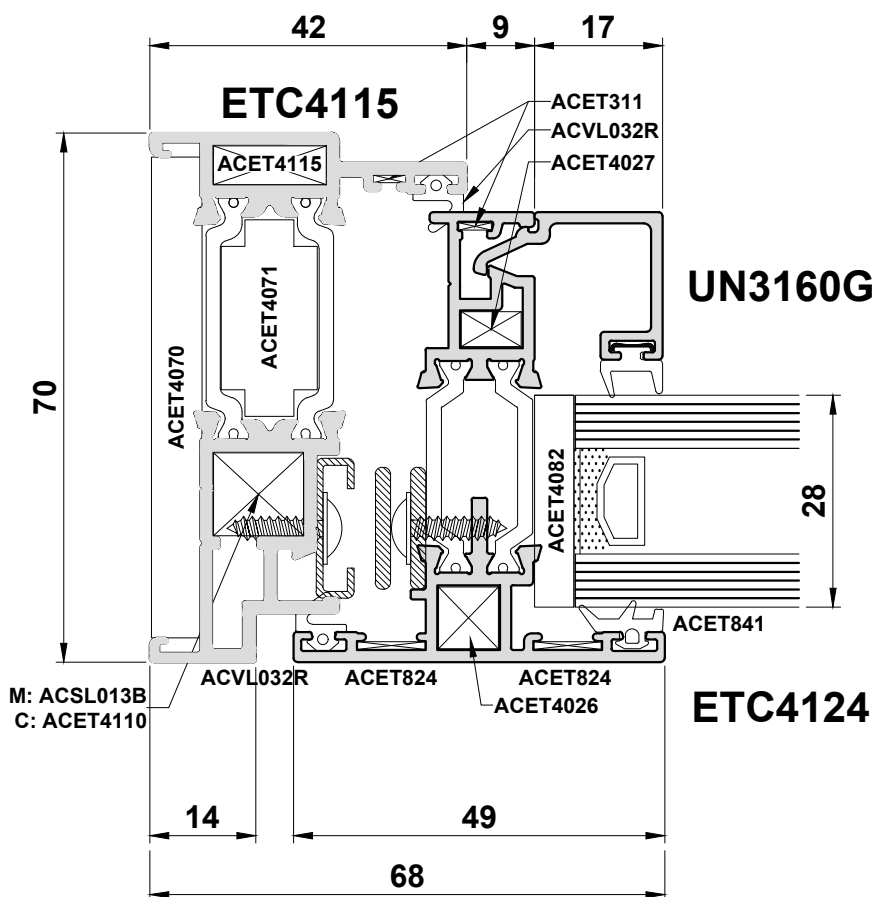
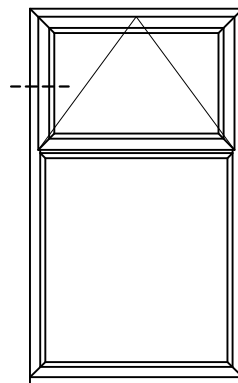
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Detail 3D



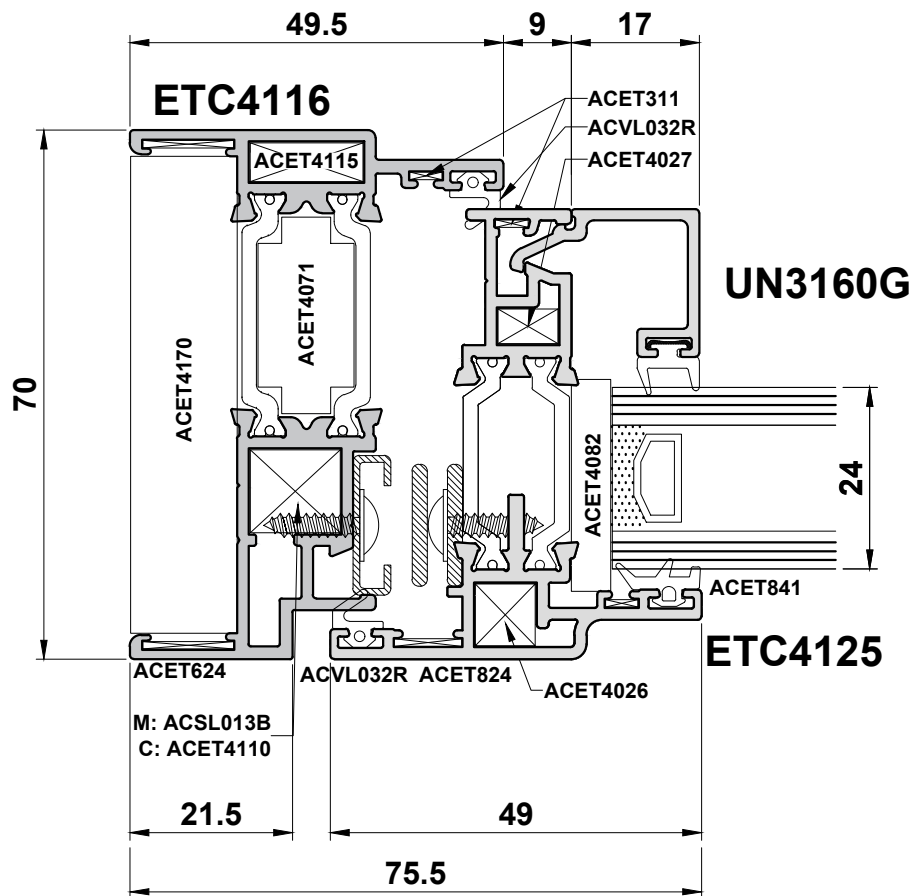
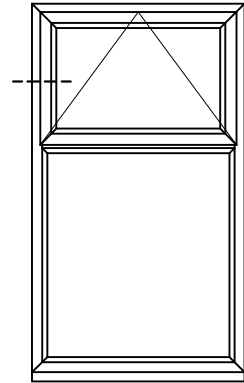
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Detail 3E



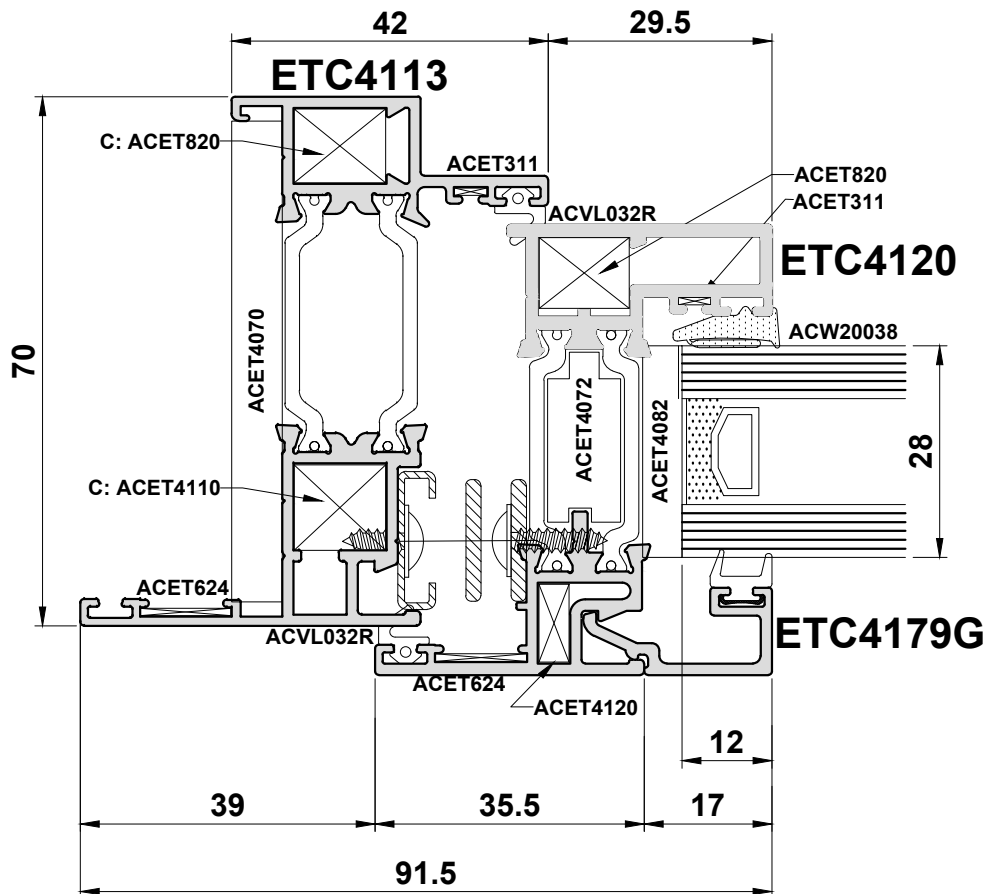
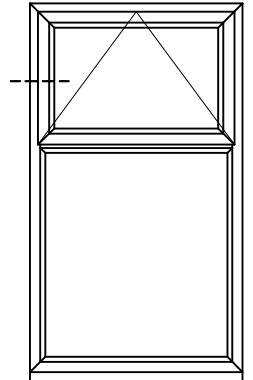
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Detail 3F



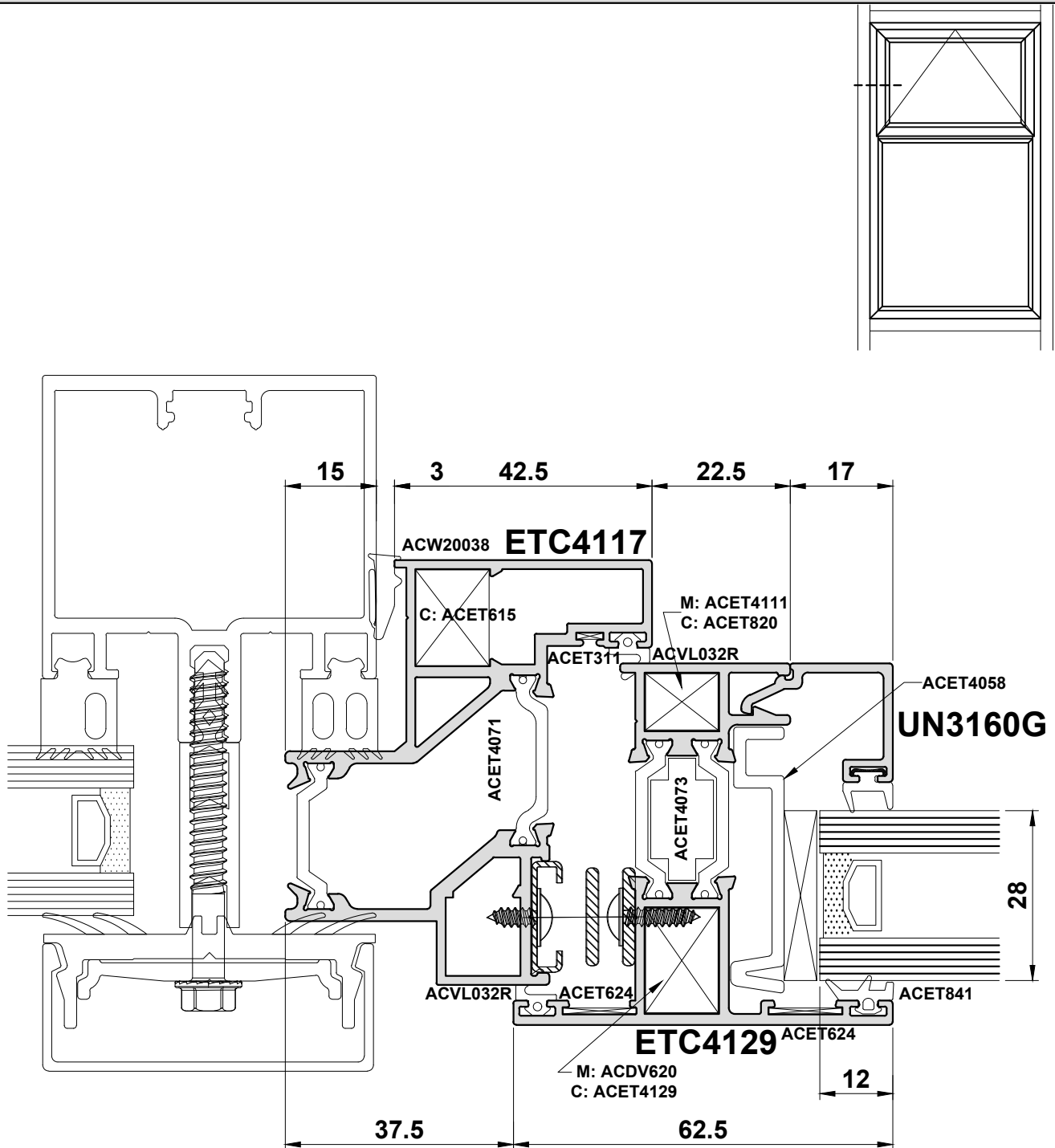
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Detail 3G



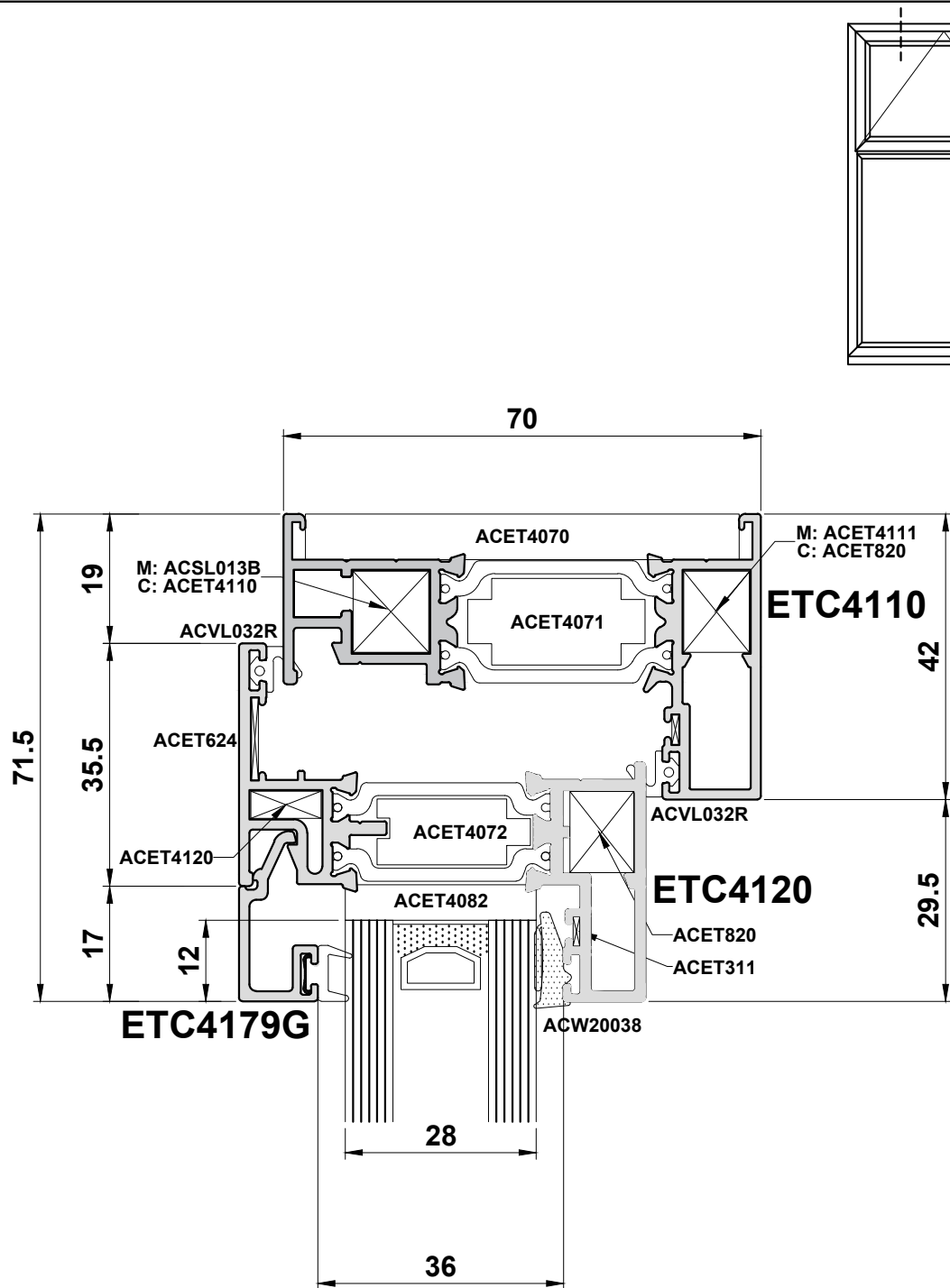
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Detail 3H



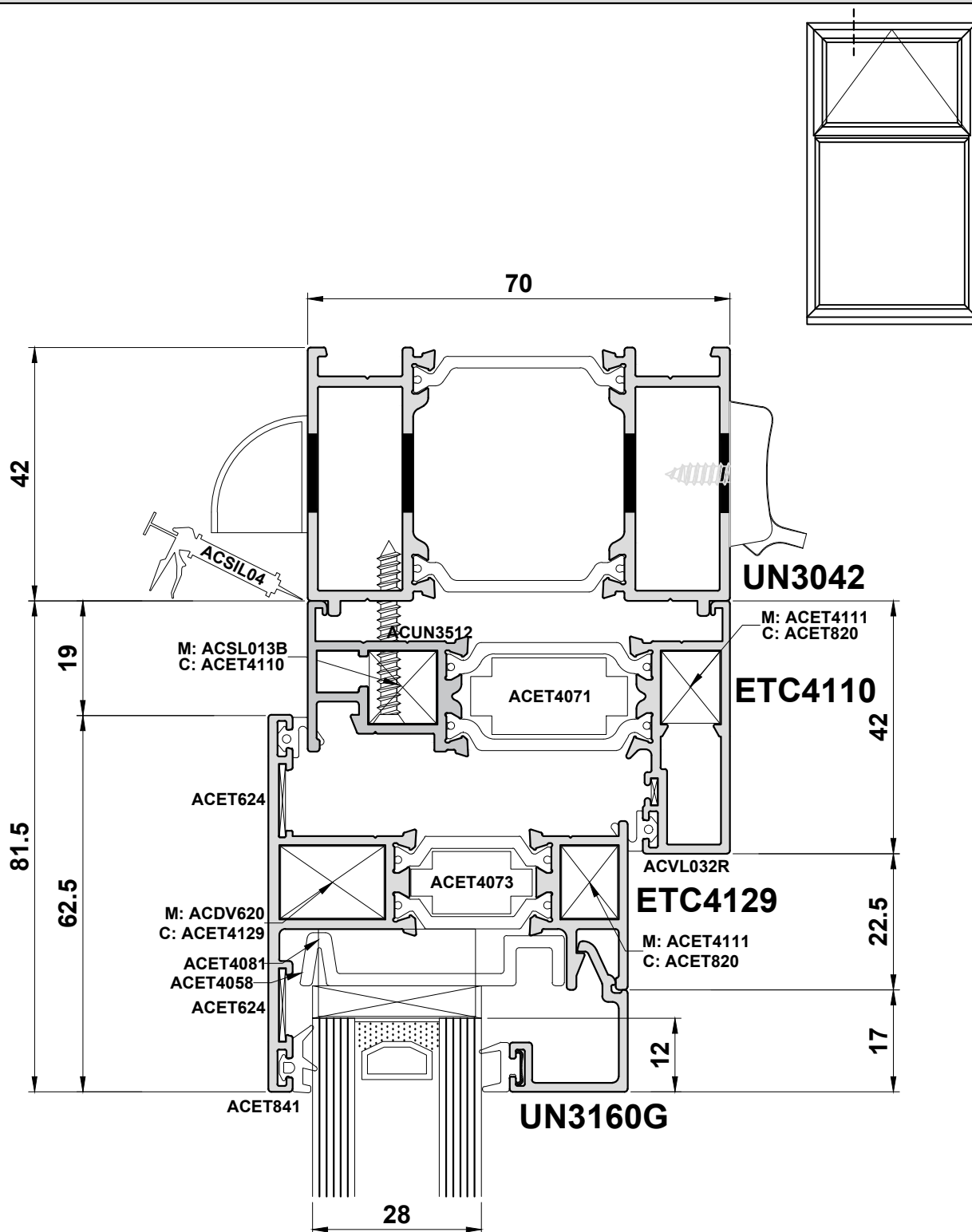
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Detail 4A



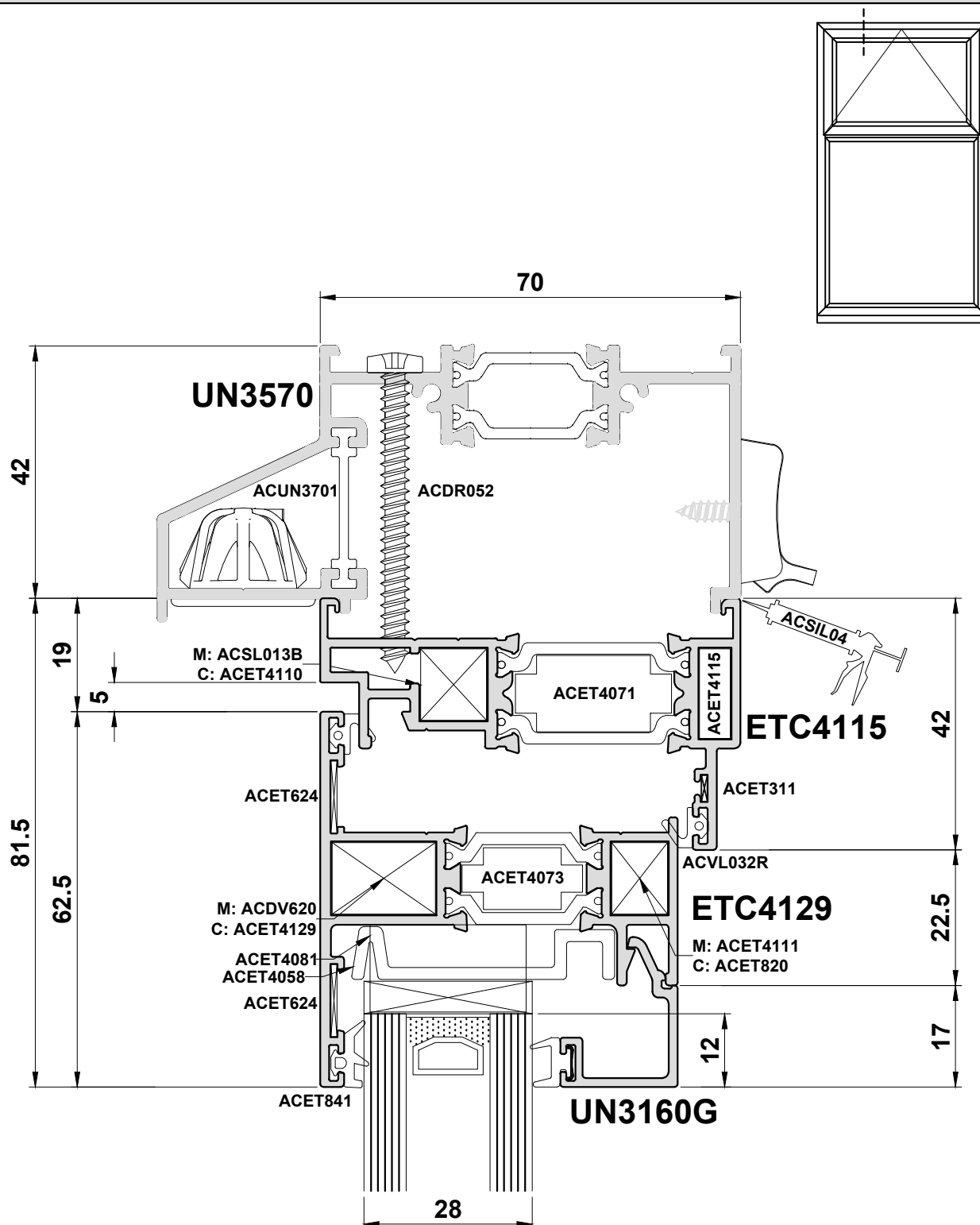
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Detail 4B



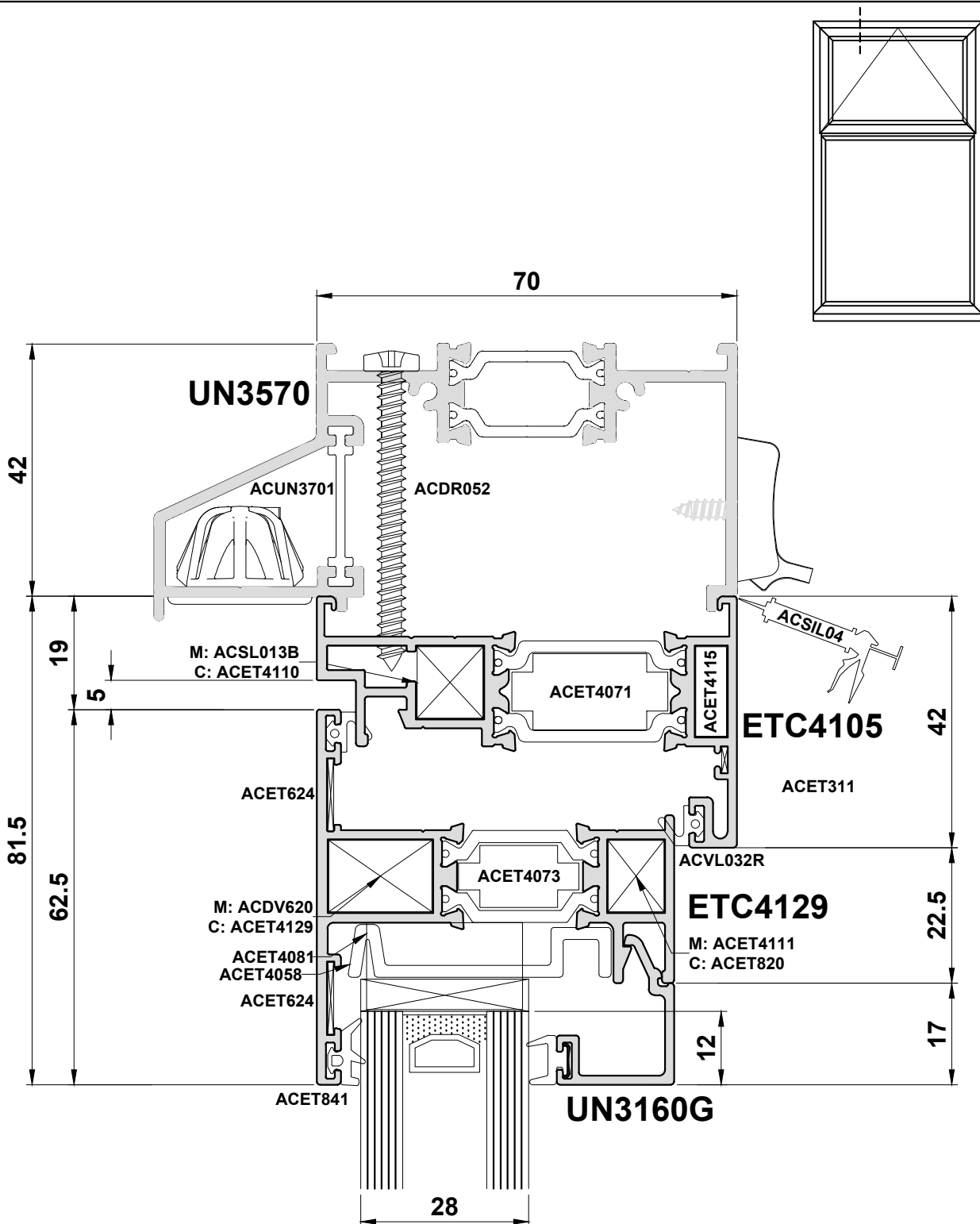
Do Not Scale From This Drawing

Detail 4C



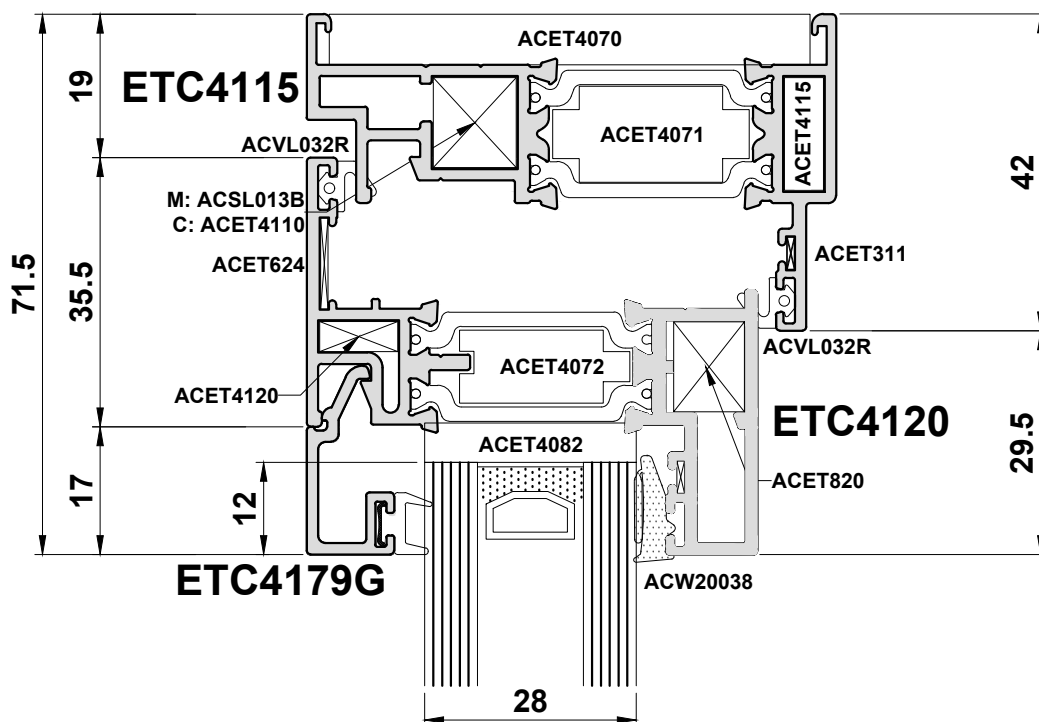
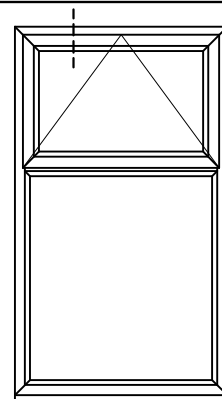
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Detail 4????



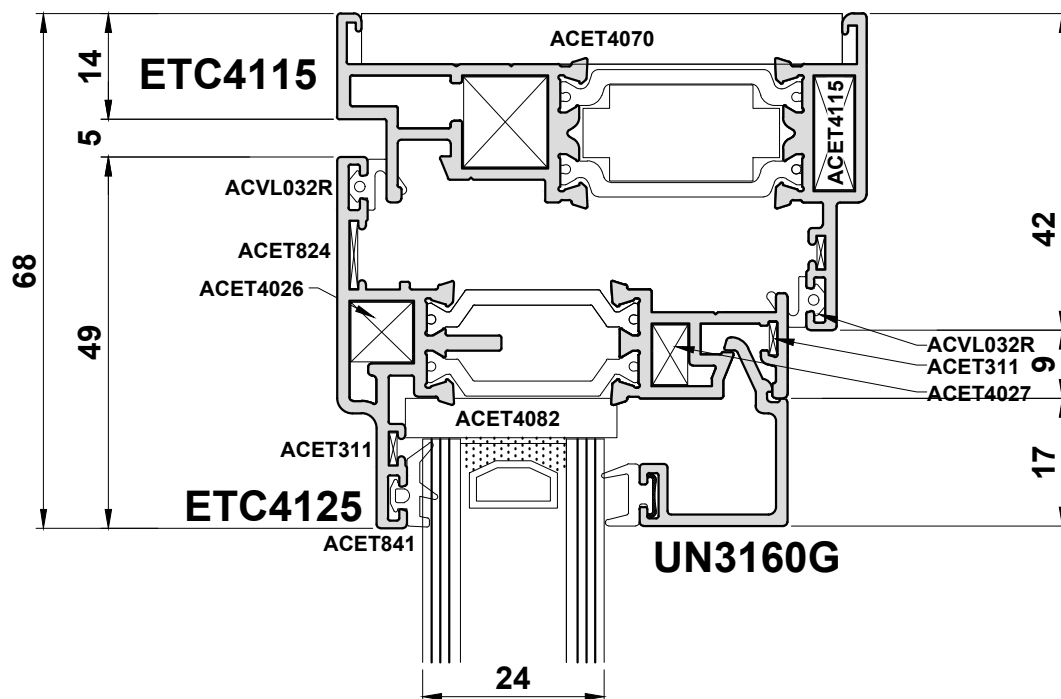
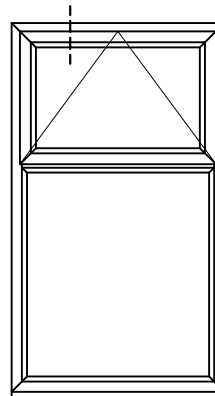
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Detail 4D



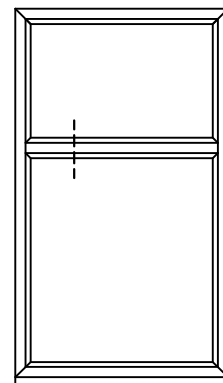
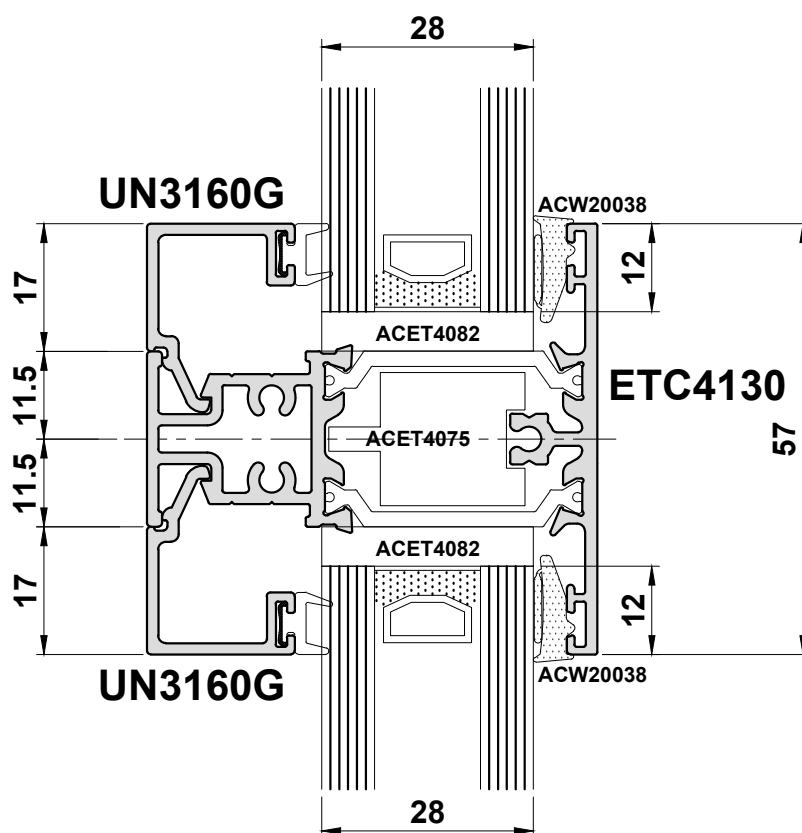
Do Not Scale From This Drawing

Detail 4E



Do Not Scale From This Drawing

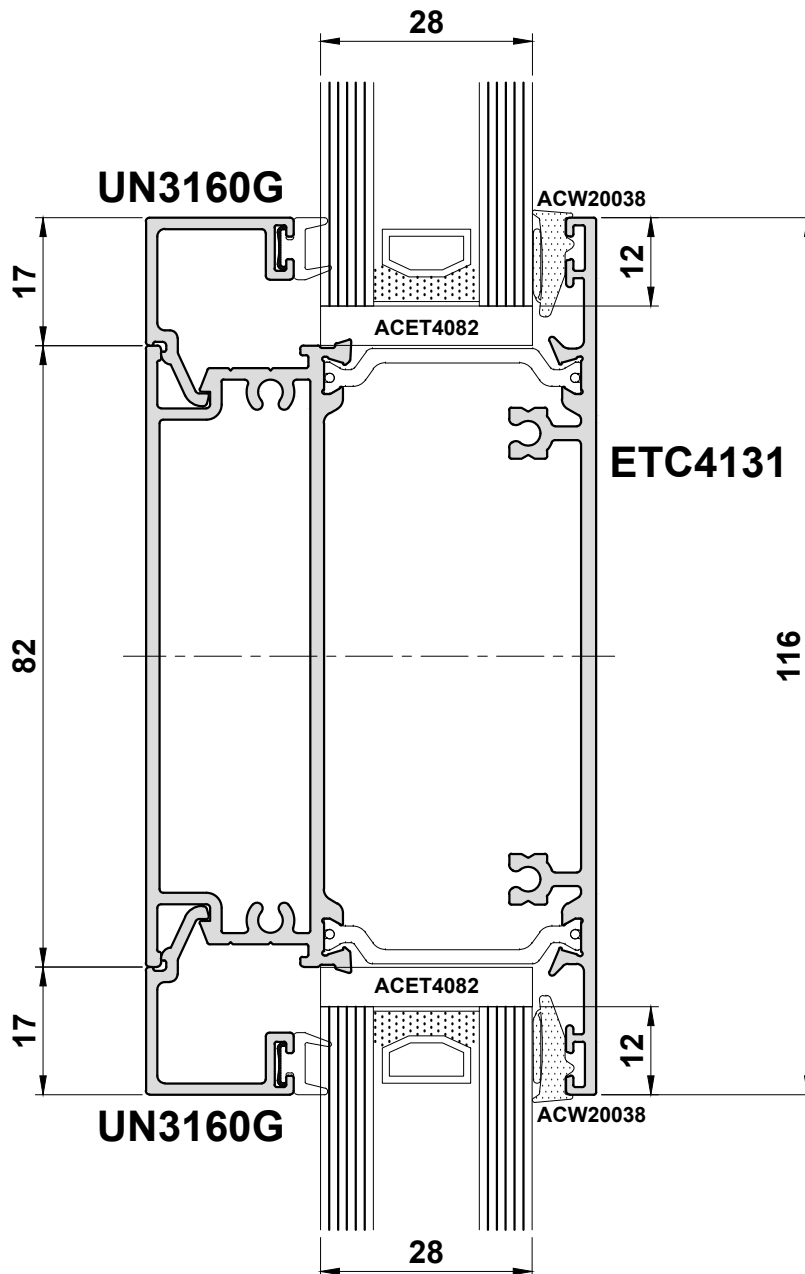
Detail 5A



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

Do Not Scale From This Drawing

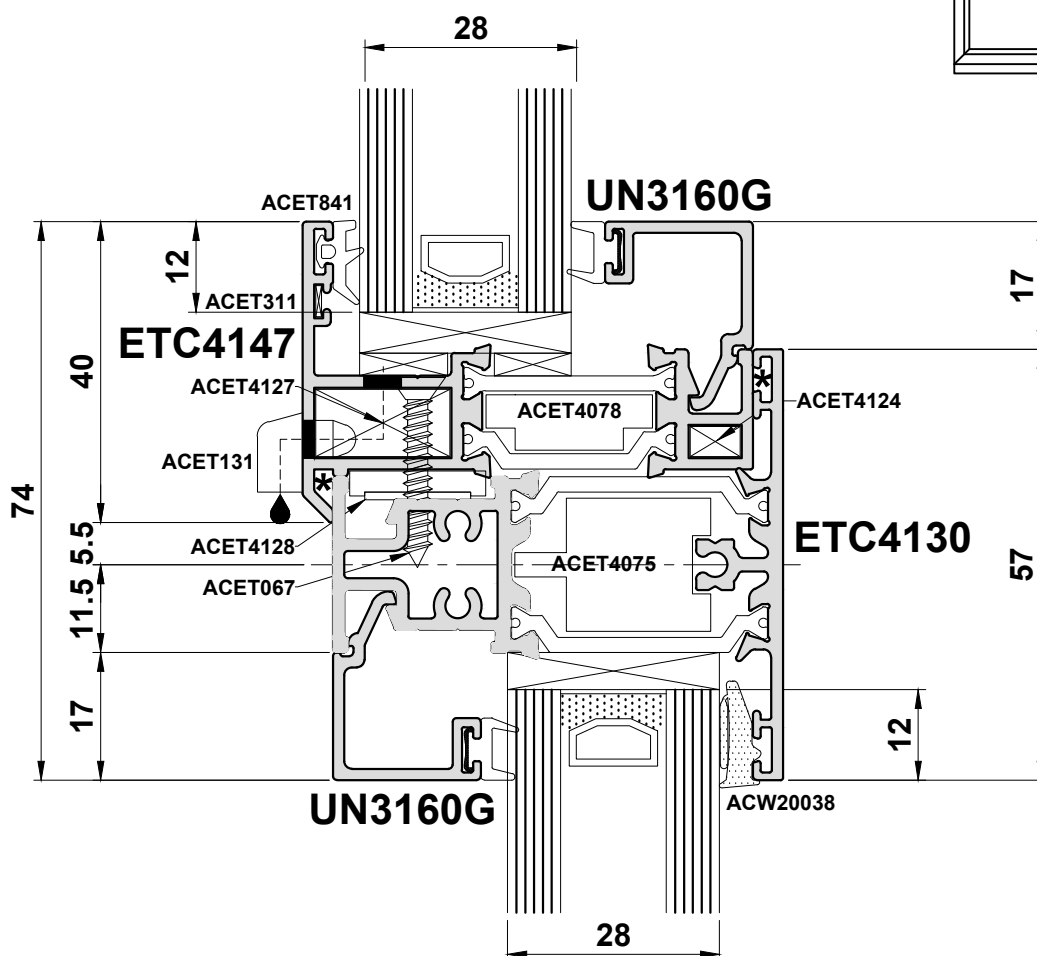
Detail 5B



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

Do Not Scale From This Drawing

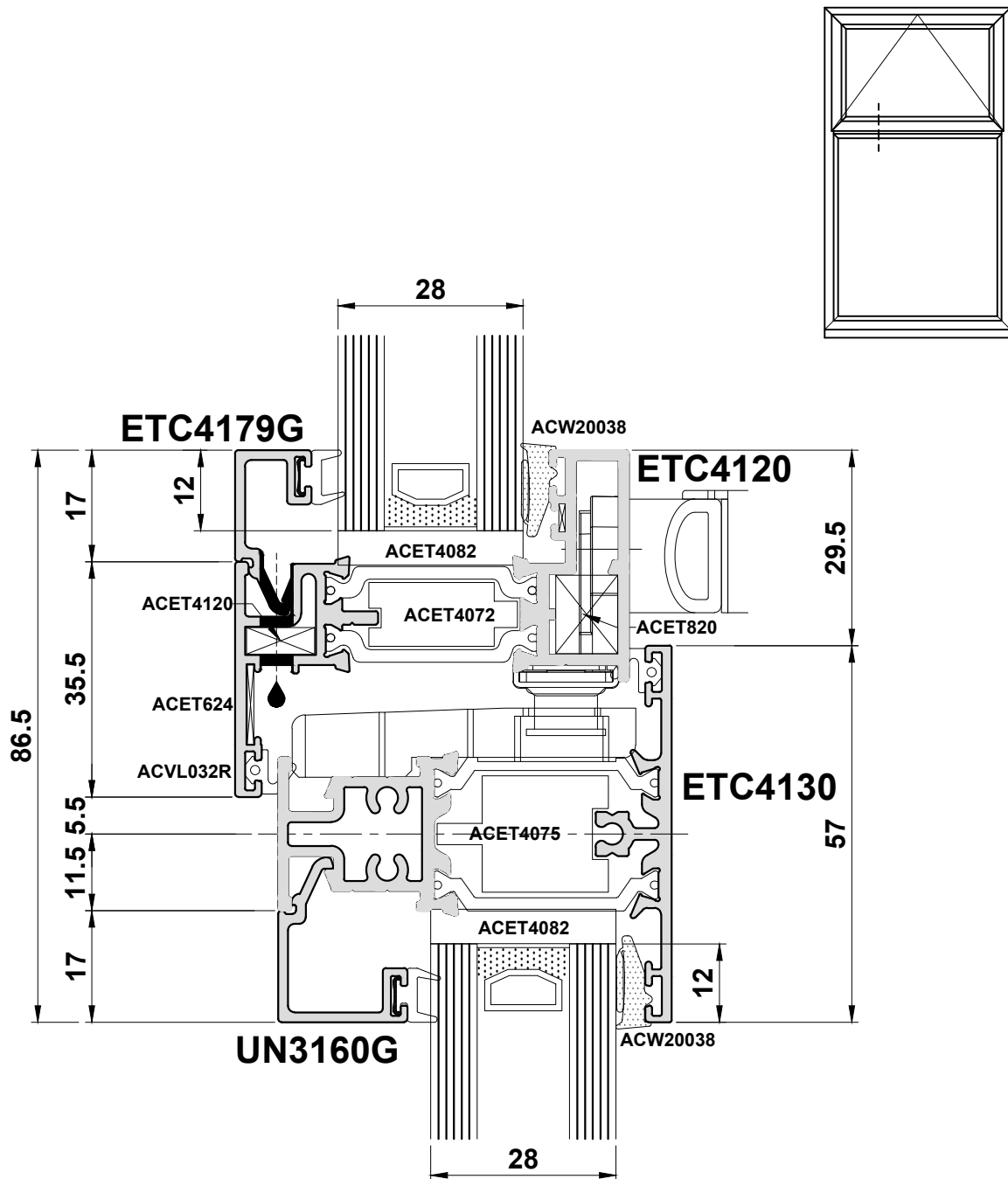
Detail 5C



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

Do Not Scale From This Drawing

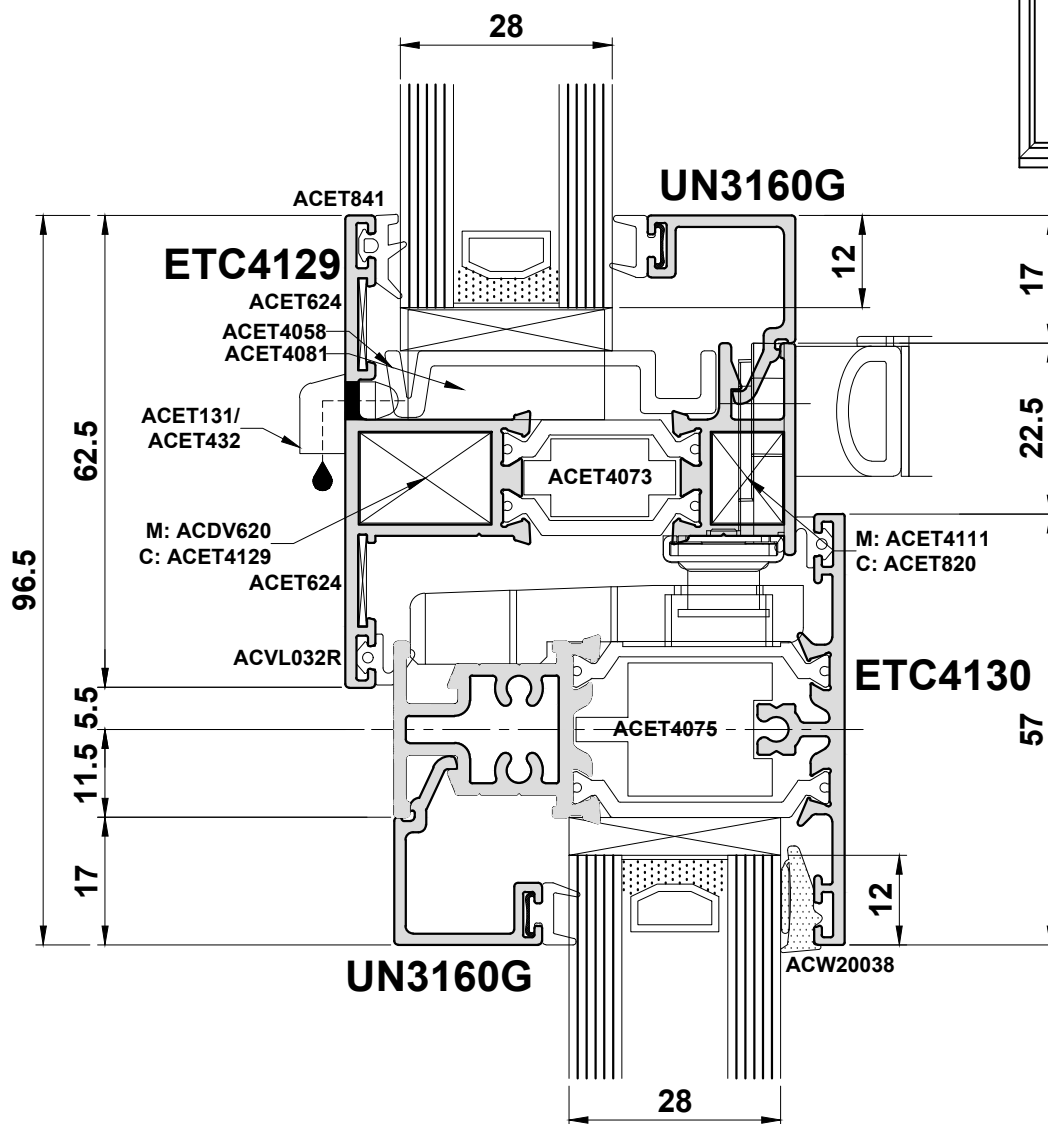
Detail 6A



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

Do Not Scale From This Drawing

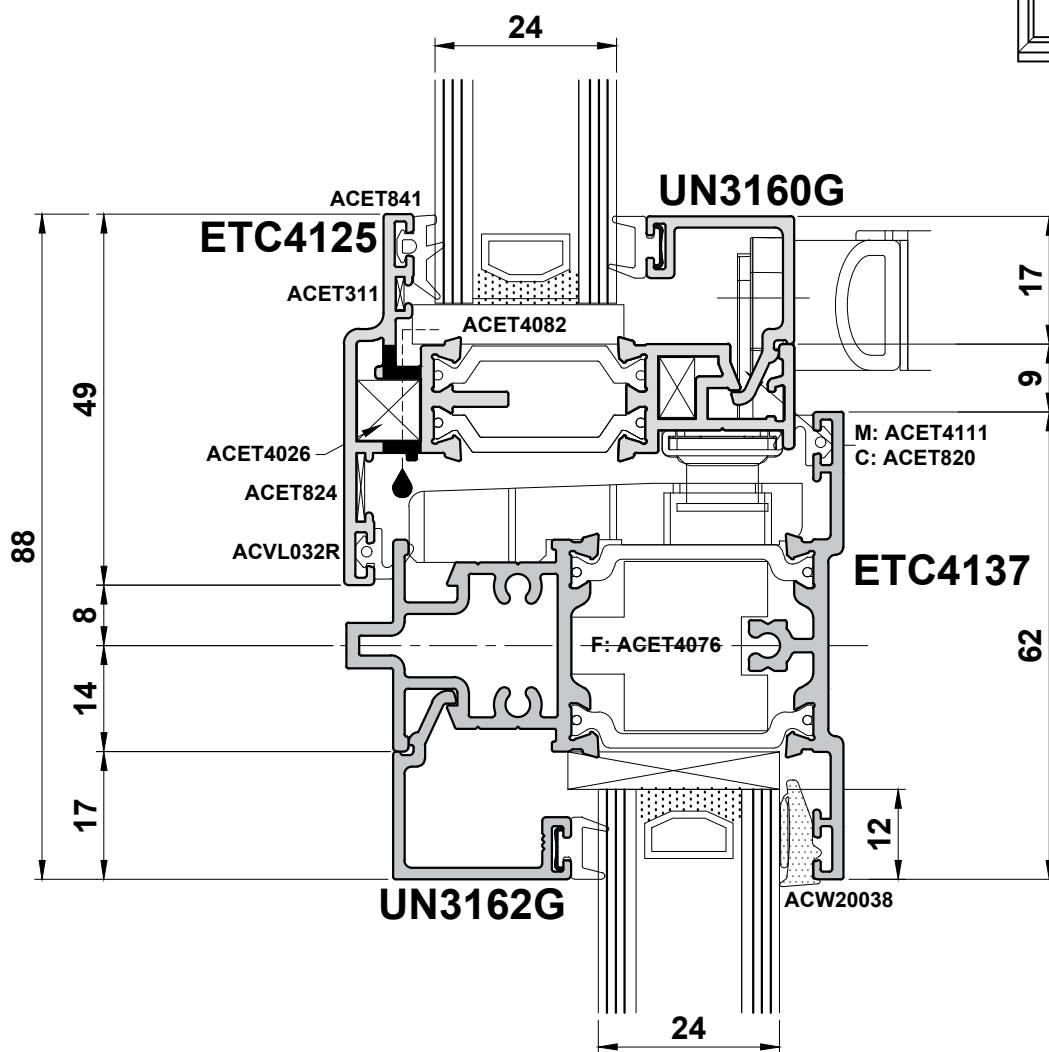
Detail 6B



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

Do Not Scale From This Drawing

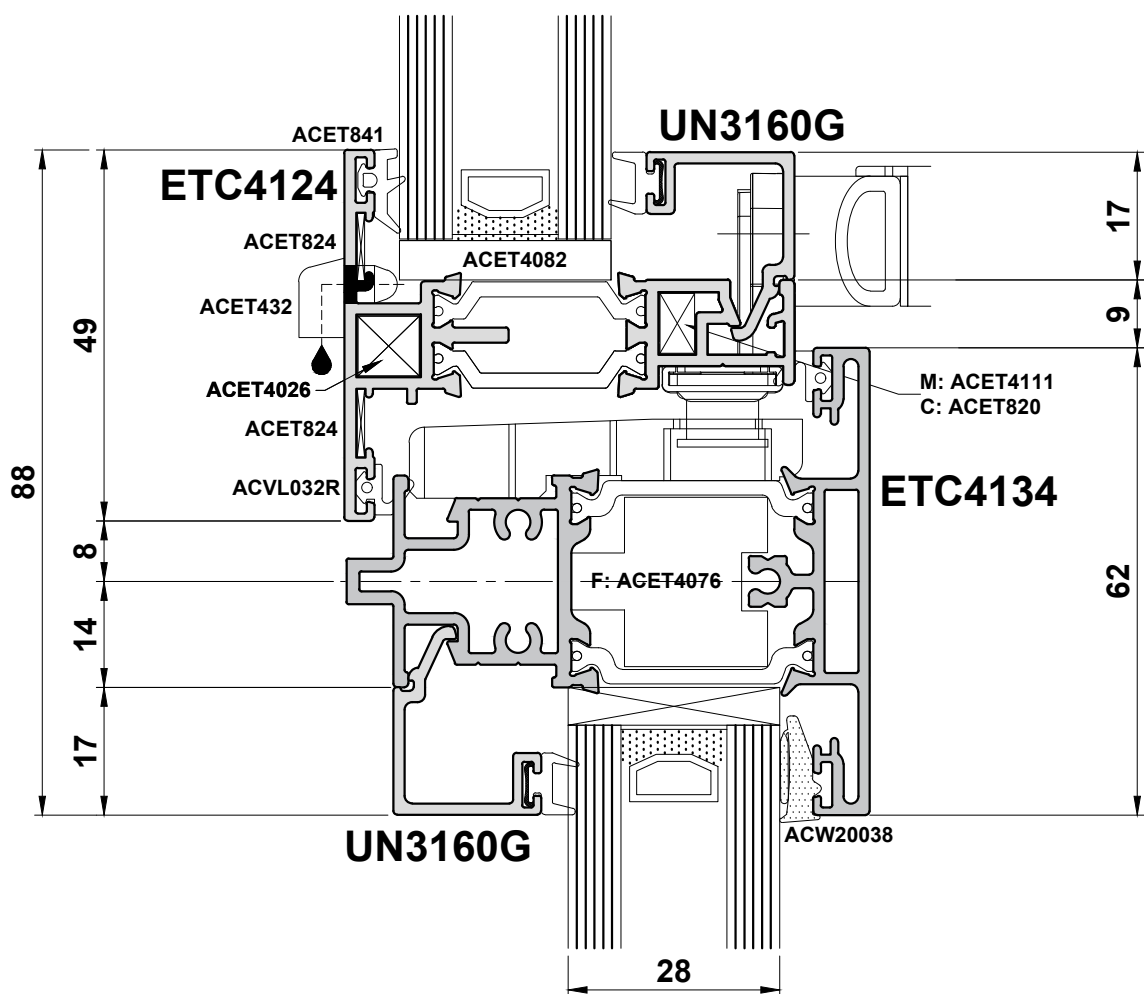
Detail 6C



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

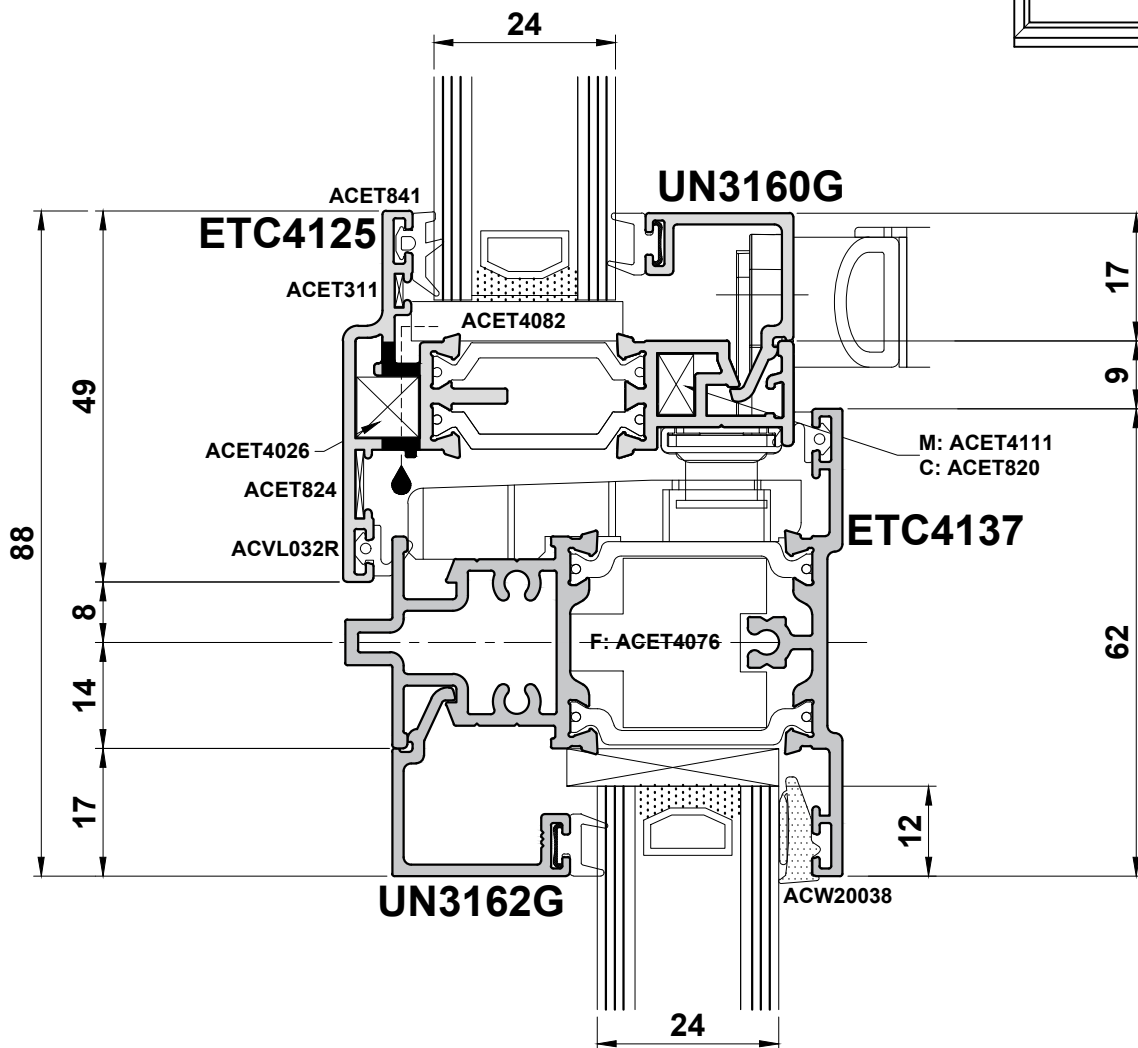
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Detail 6D



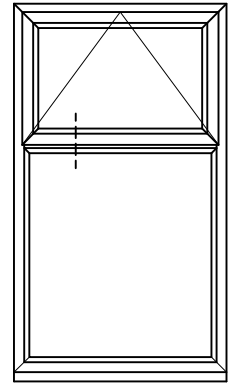
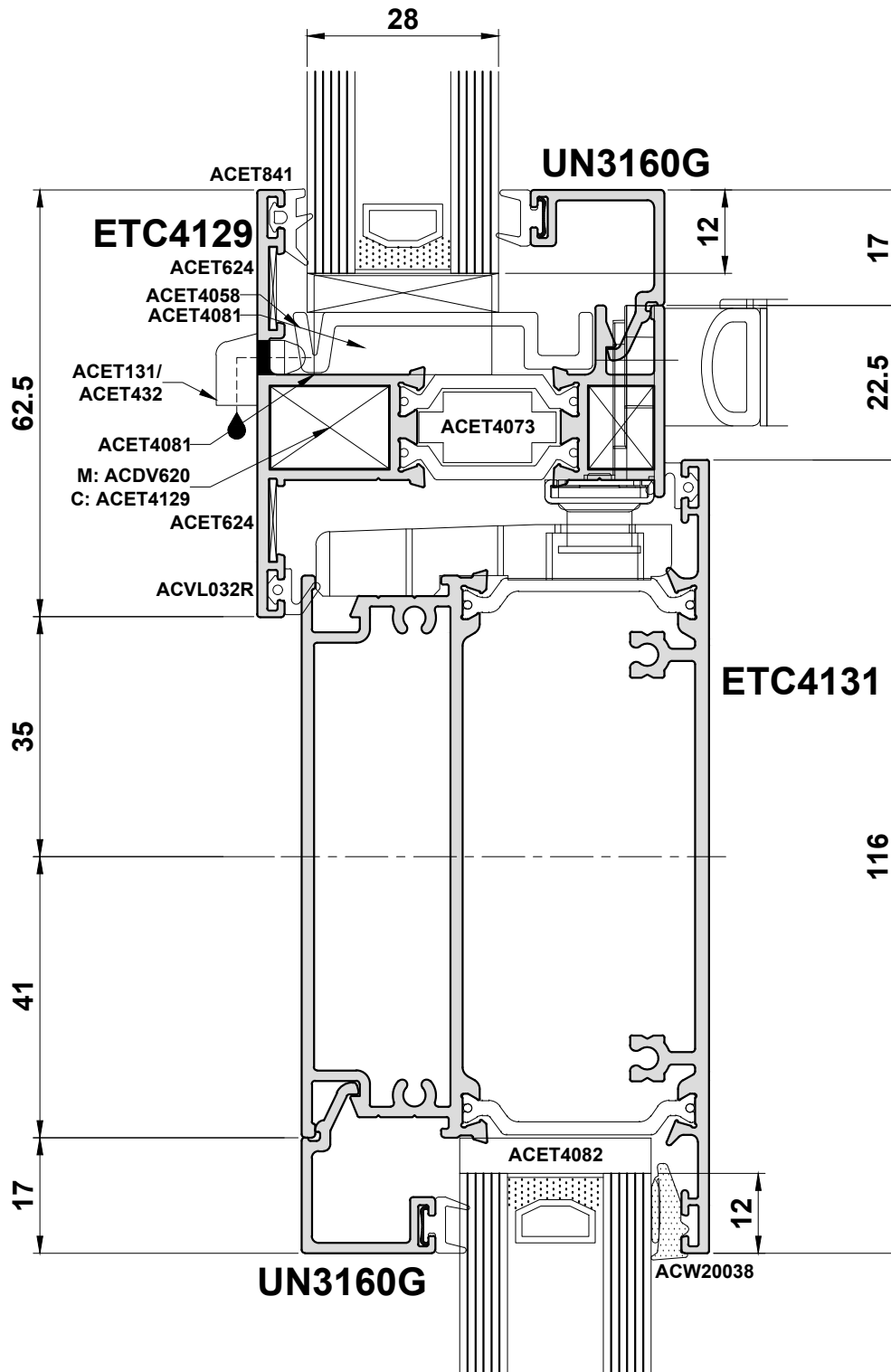
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Detail 6E



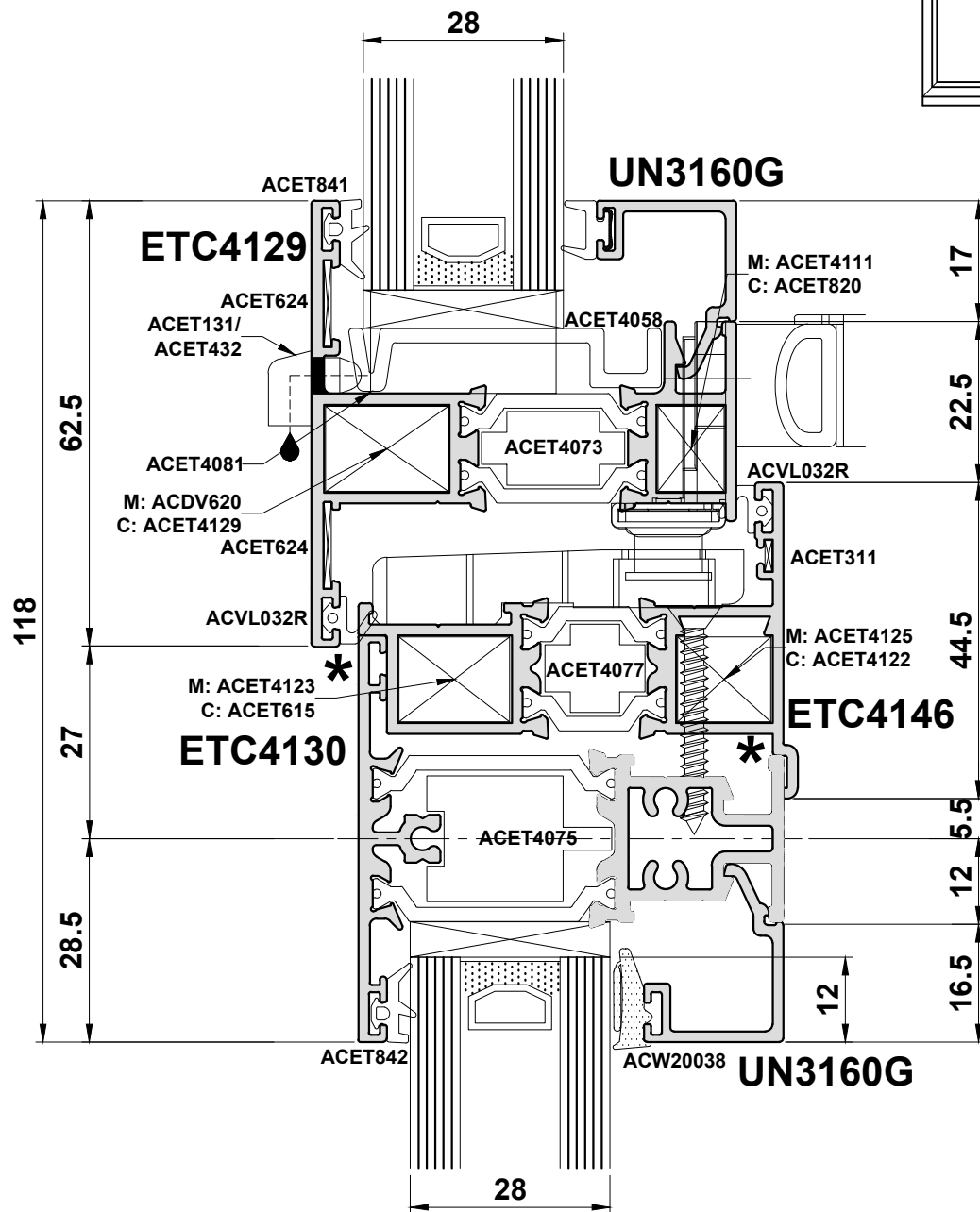
Do Not Scale From This Drawing

Detail 6F



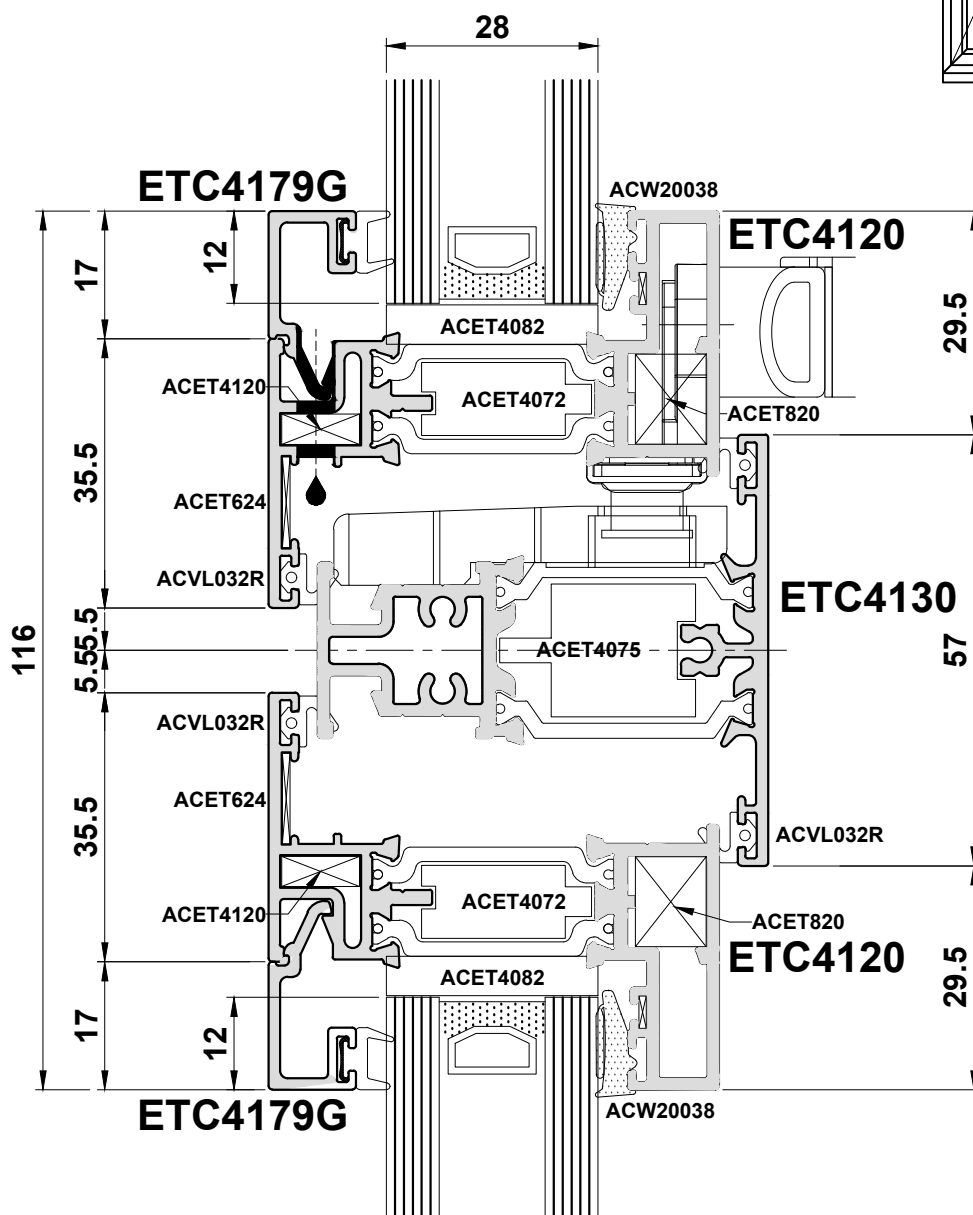
Note: Transoms will drain through the join to the outerframe.

Do Not Scale From This Drawing



Do Not Scale From This Drawing

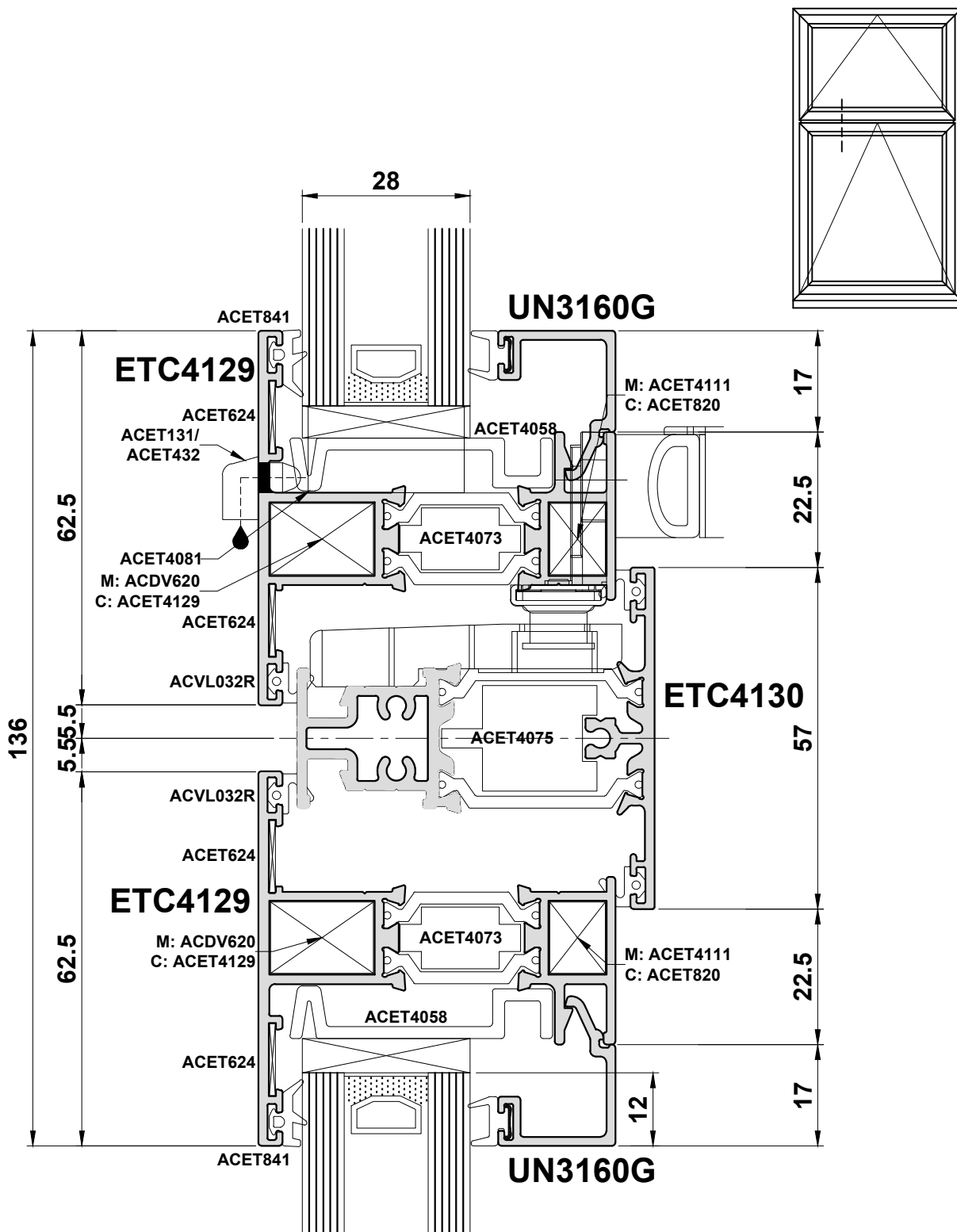
Detail 7A



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

Do Not Scale From This Drawing

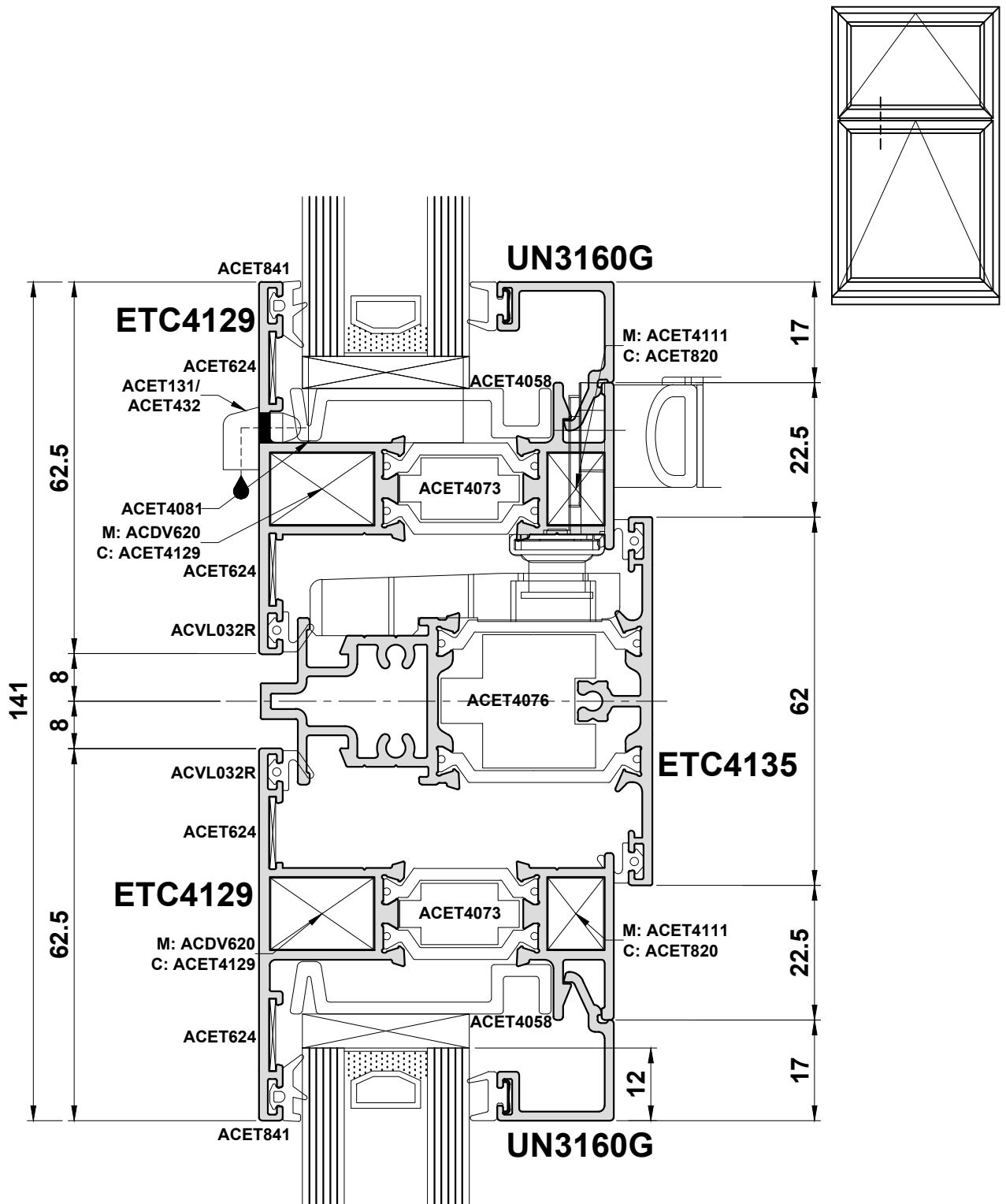
Detail 7B



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

Do Not Scale From This Drawing

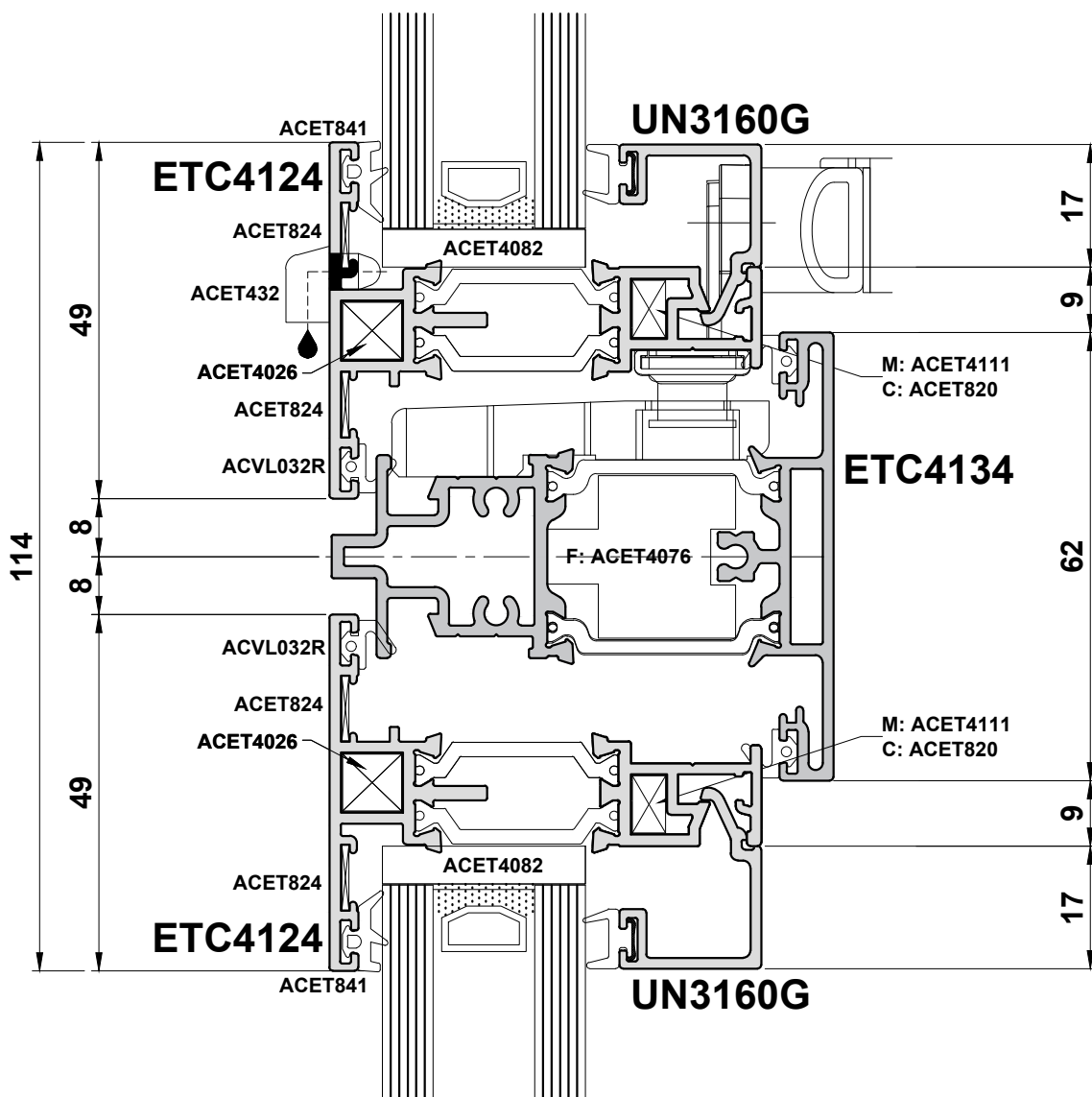
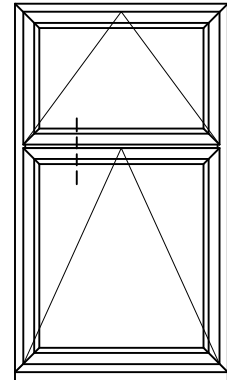
Detail 7C



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

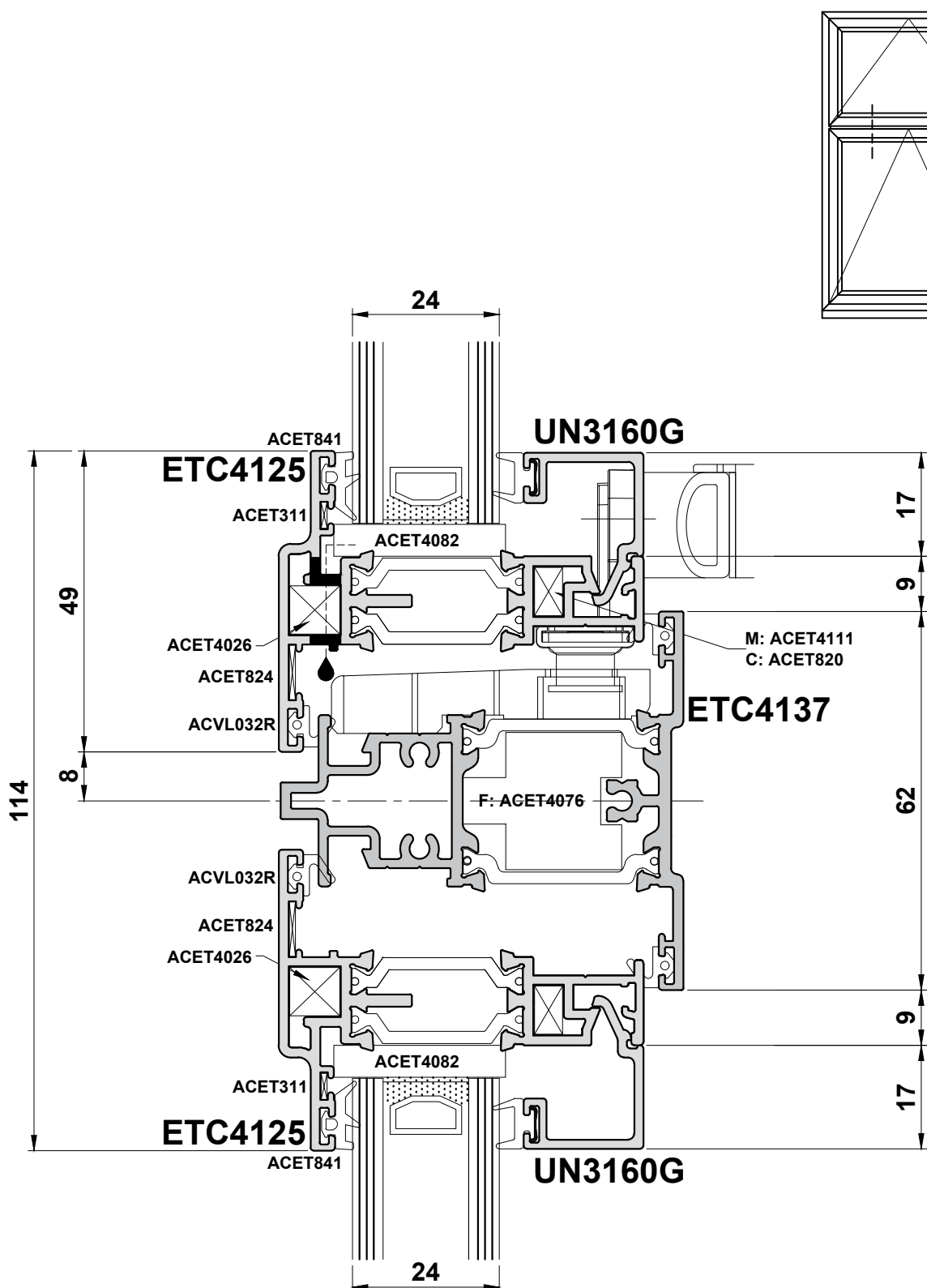
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Detail 7D



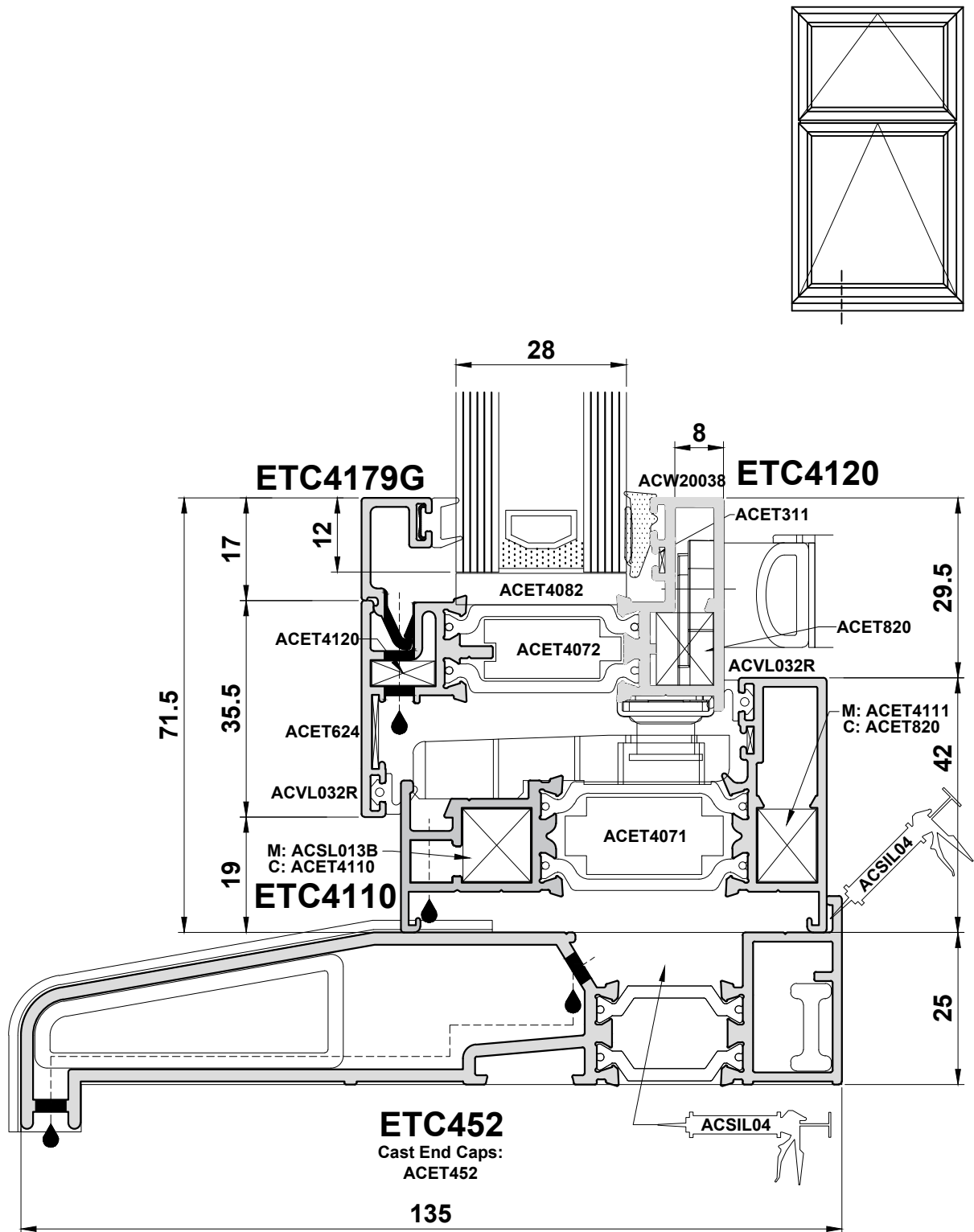
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Detail 7E



Do Not Scale From This Drawing

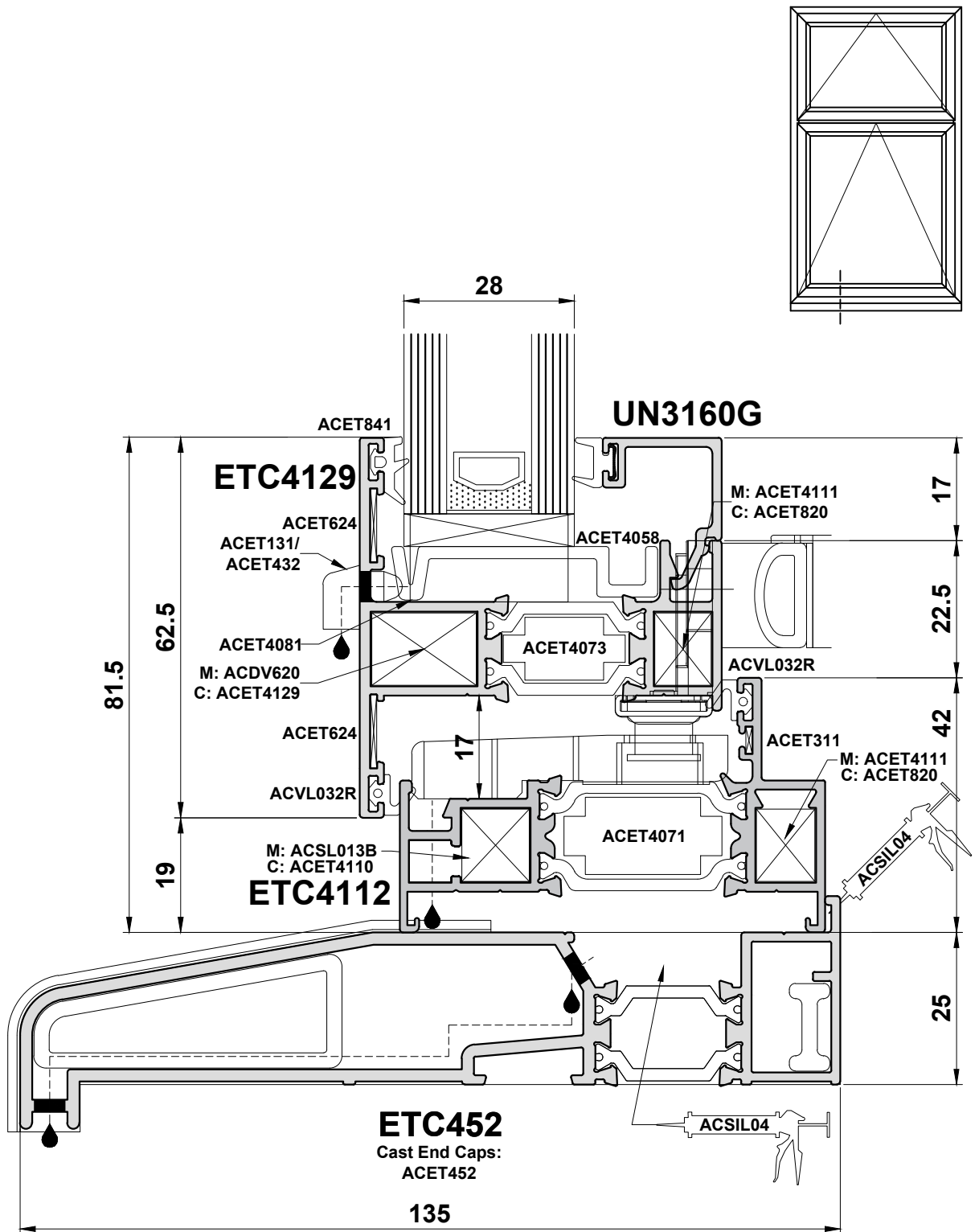
Detail 8A



Cill end caps should be sealed to cill to prevent water egress over edge

Do Not Scale From This Drawing

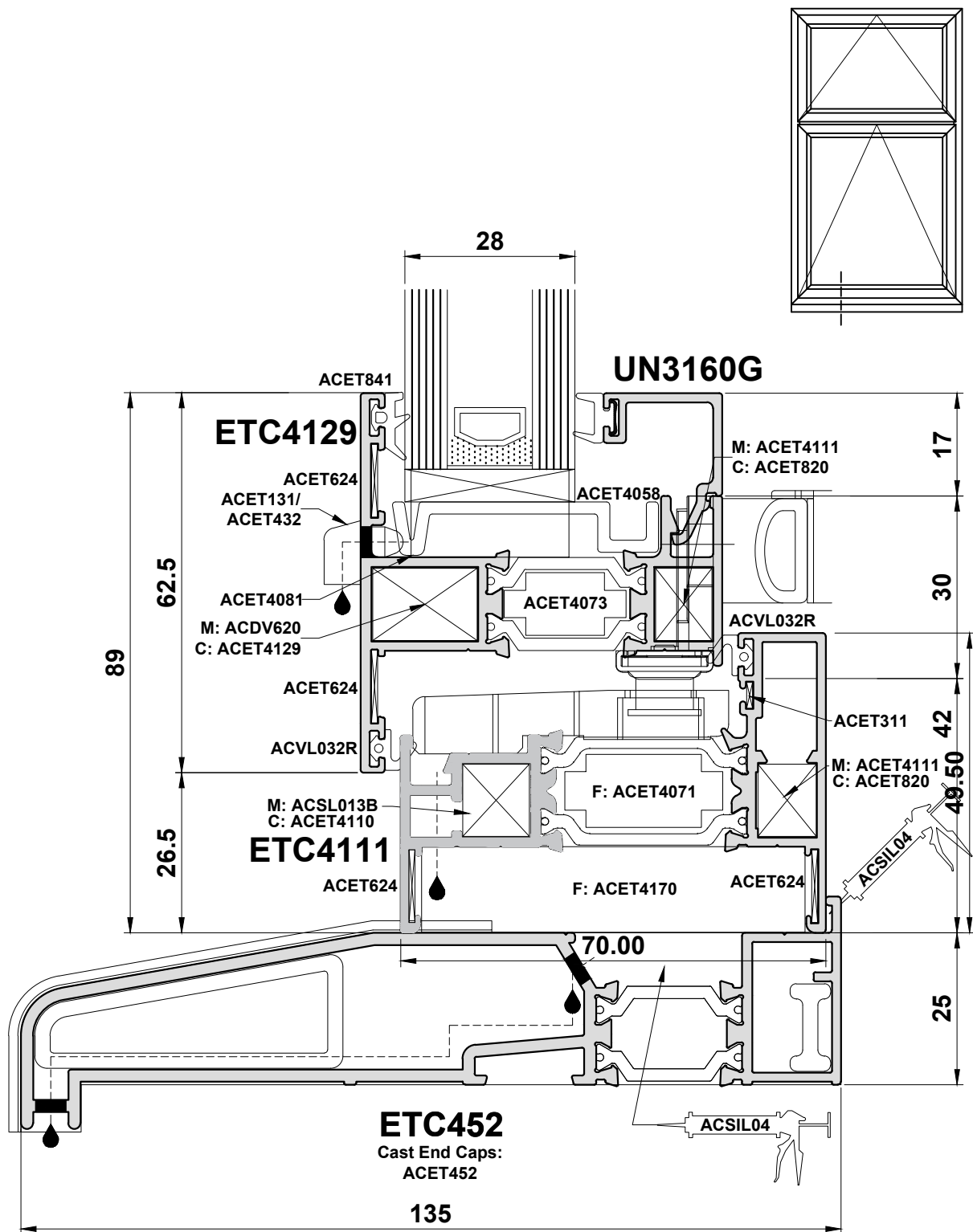
Detail 8B



Cill end caps should be sealed to cill to prevent water egress over edge

Do Not Scale From This Drawing

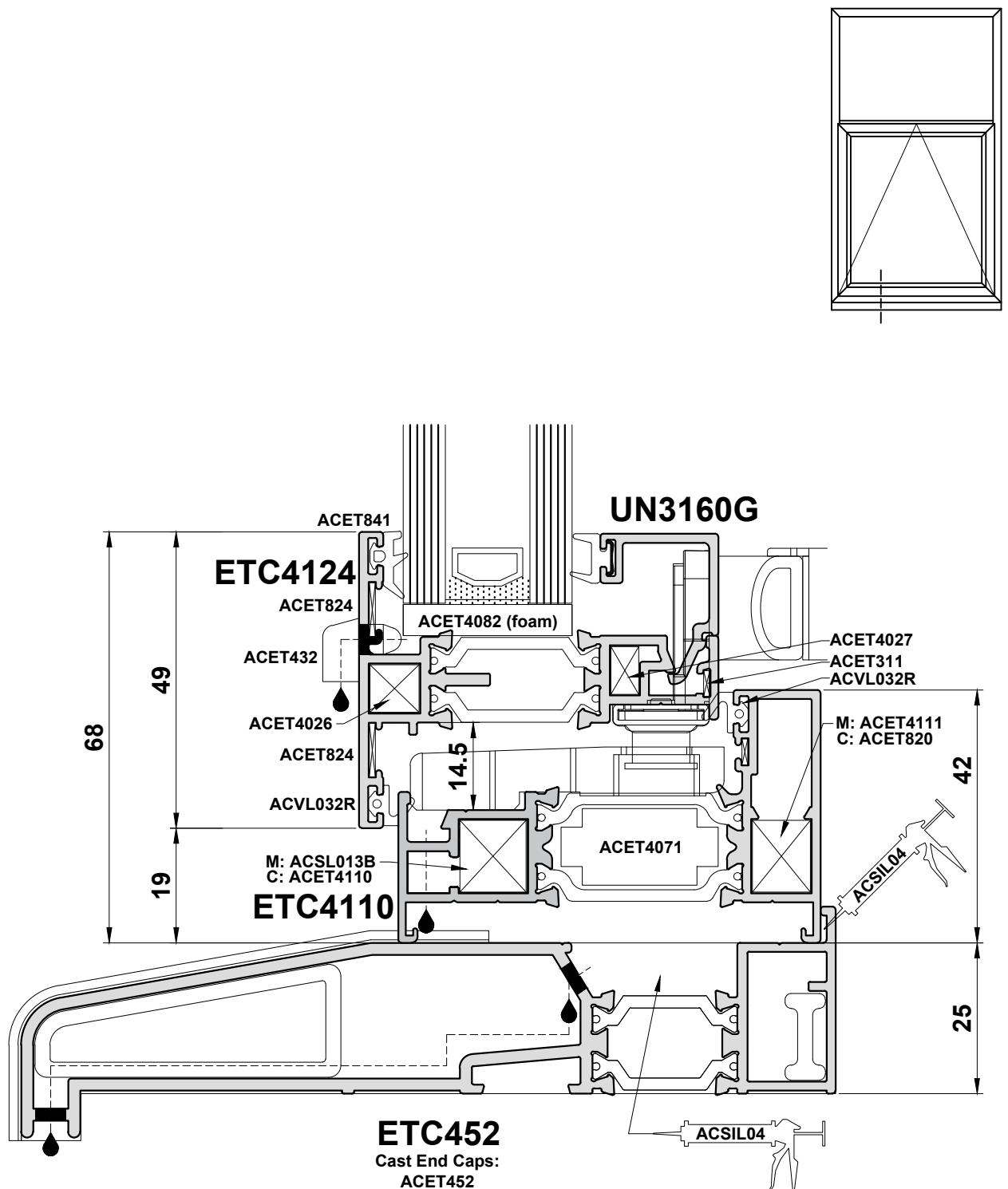
Detail 8C



Cill end caps should be sealed to cill to prevent water egress over edge

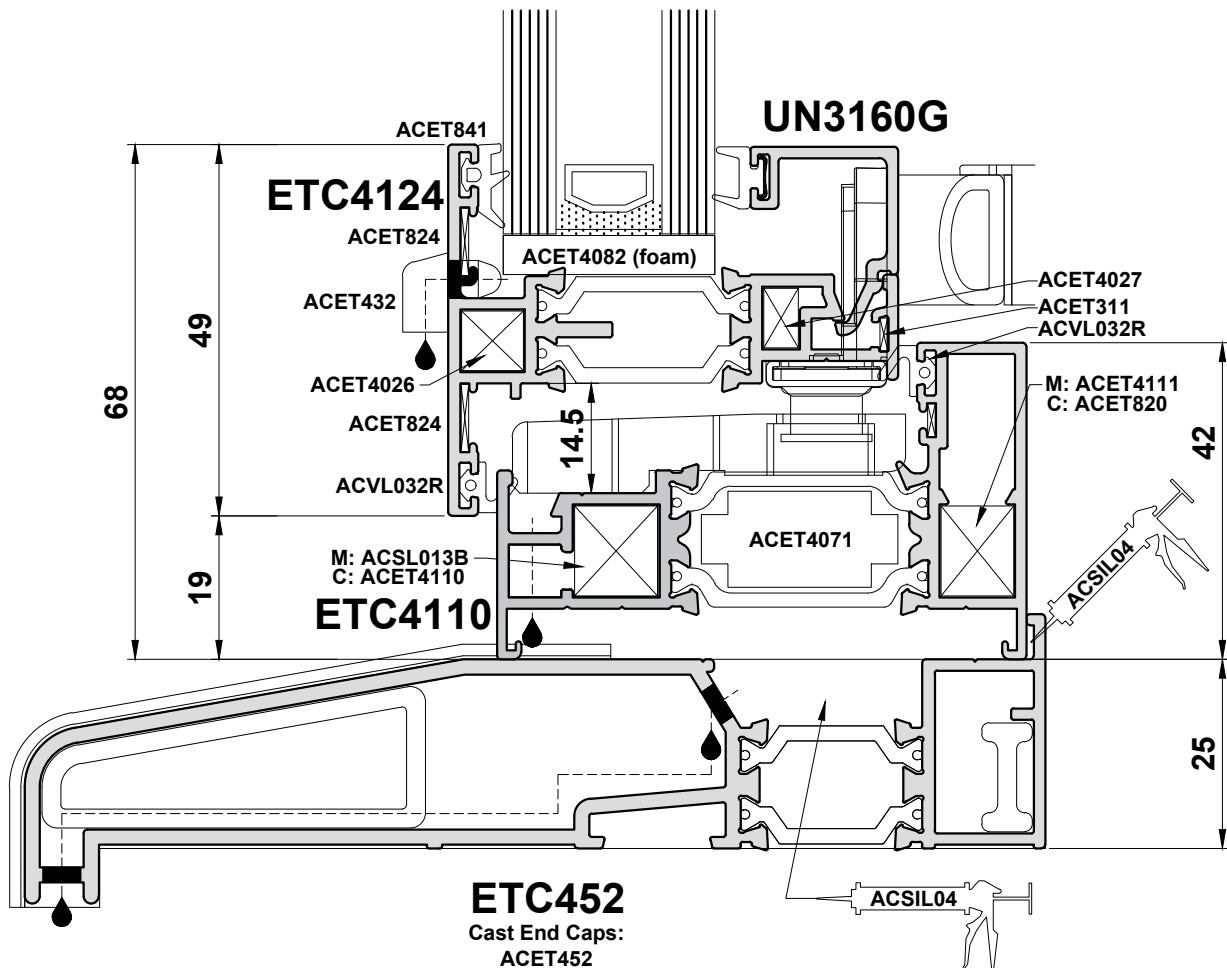
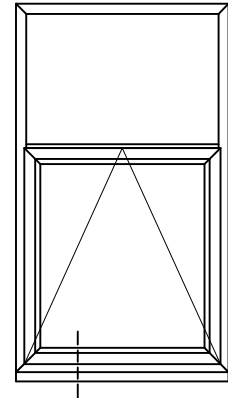
Do Not Scale From This Drawing

Detail 8D



Cill end caps should be sealed to cill to prevent water egress over edge

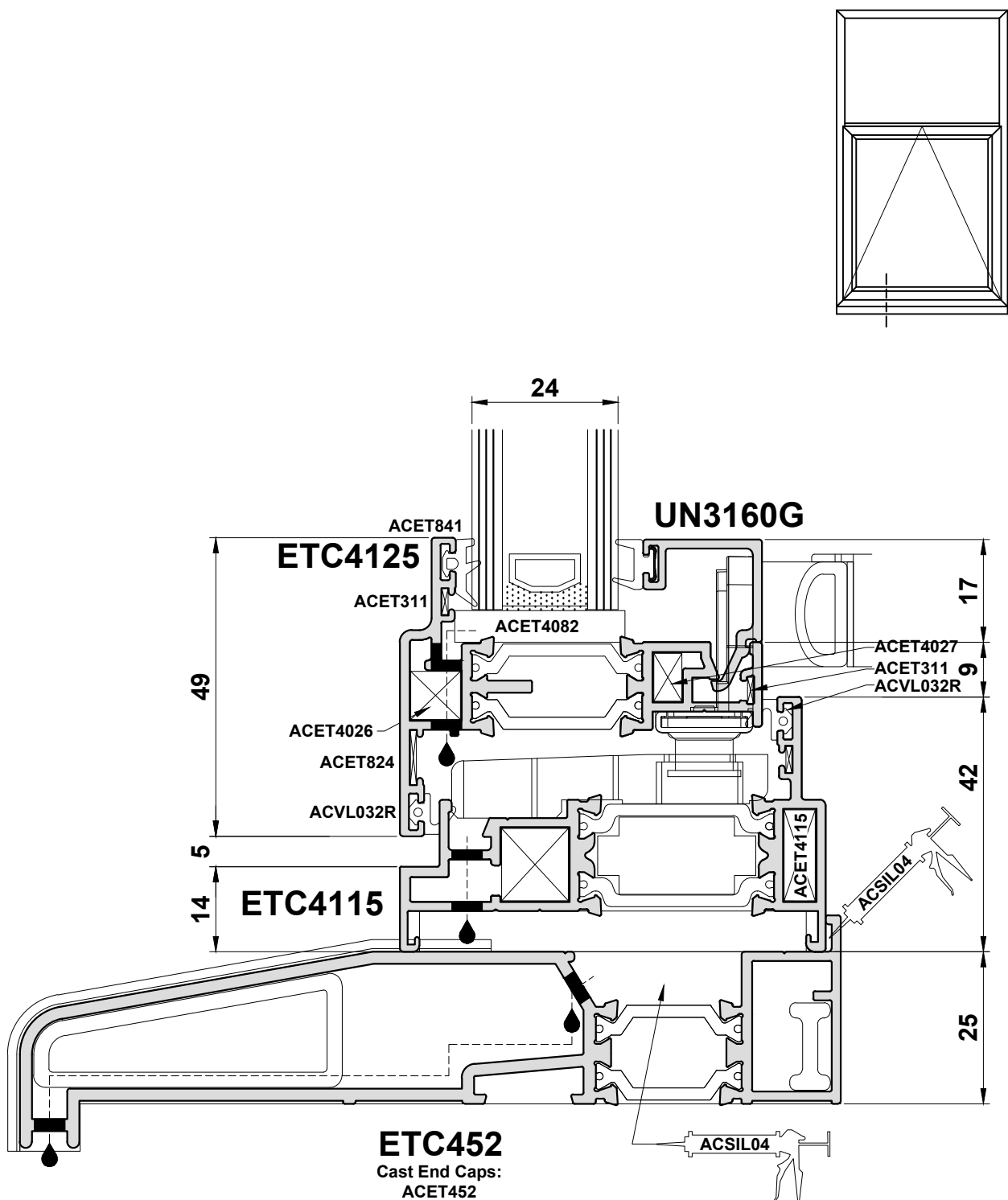
Do Not Scale From This Drawing



Cill end caps should be sealed to cill to prevent water egress over edge

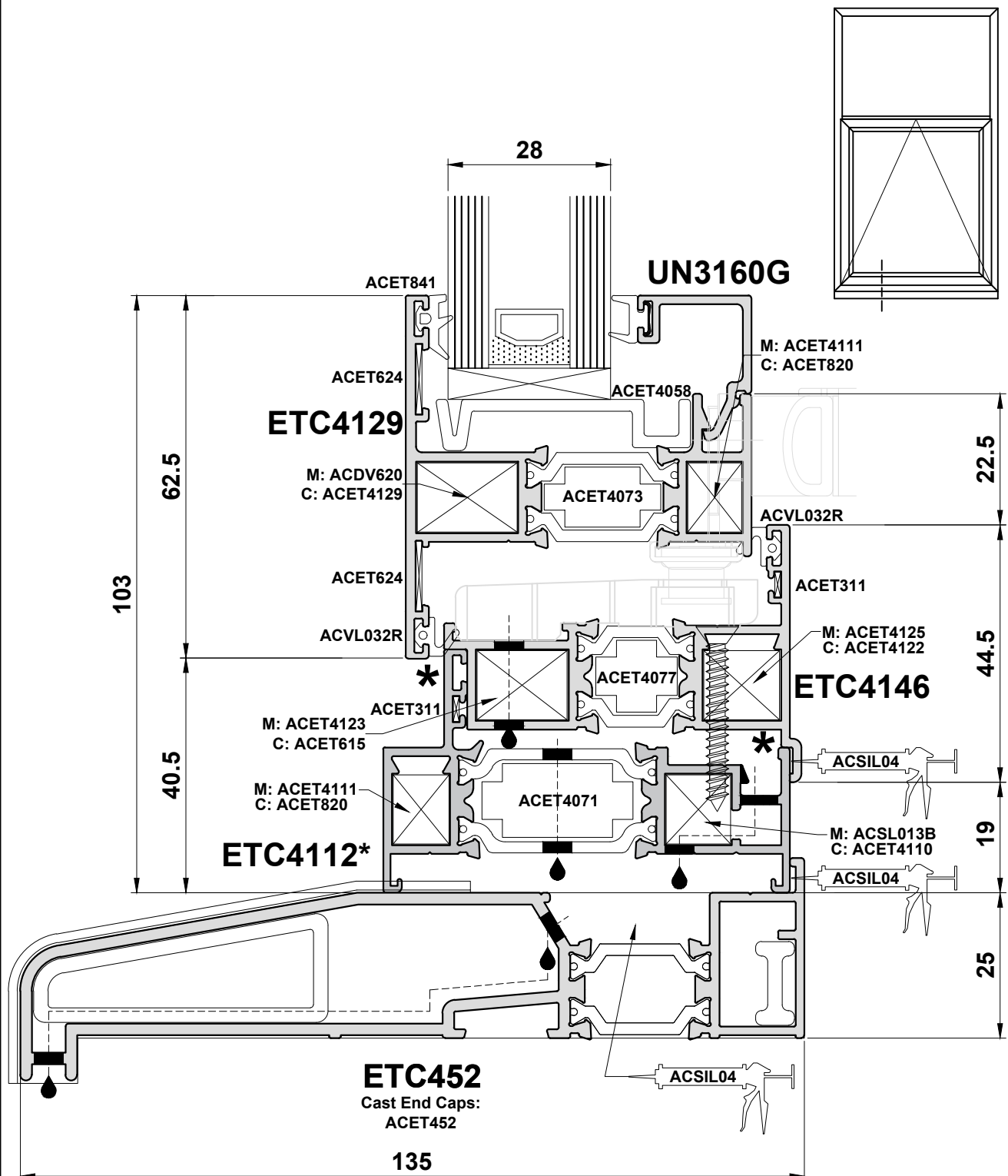
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Detail 8F



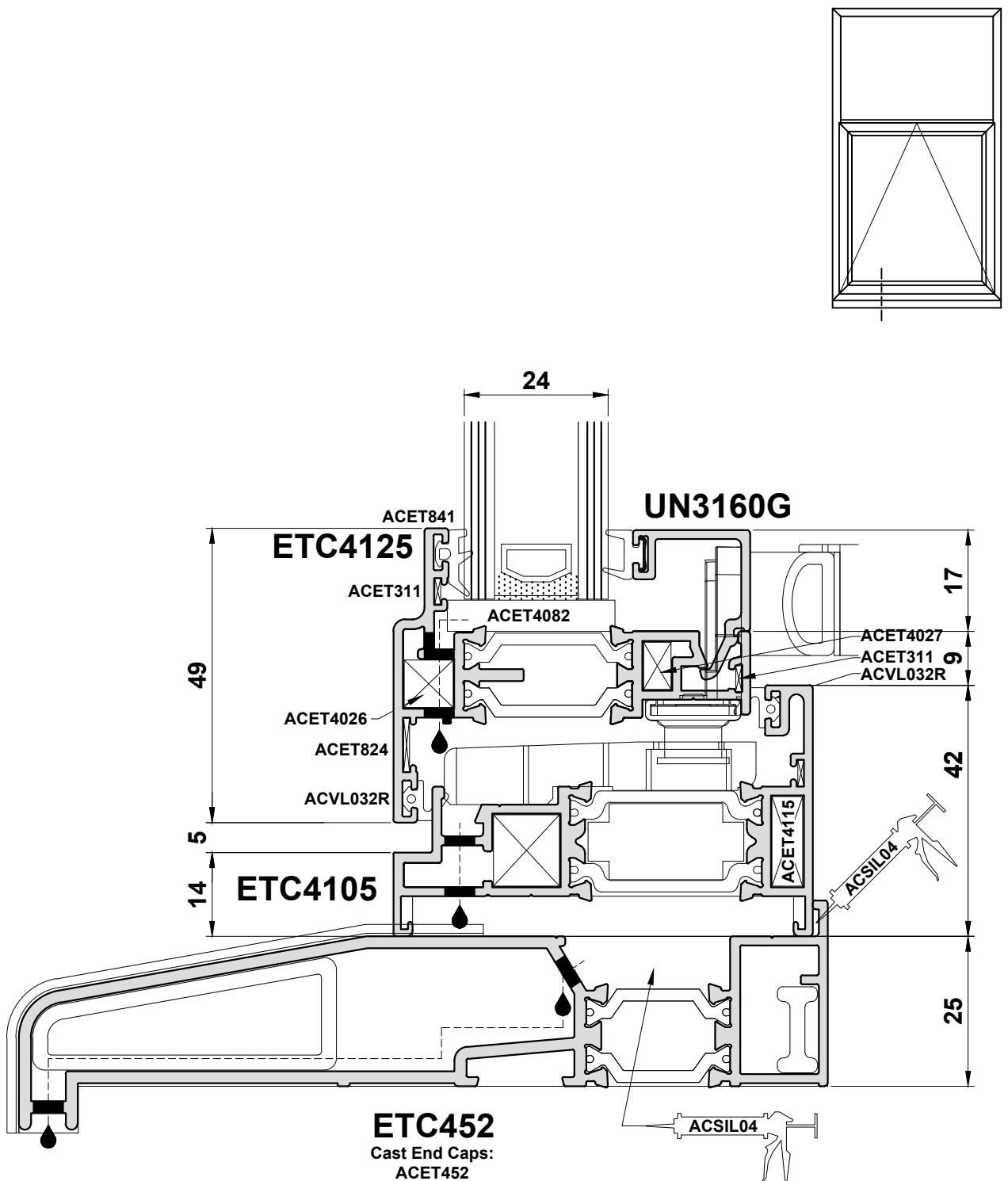
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Detail 8G



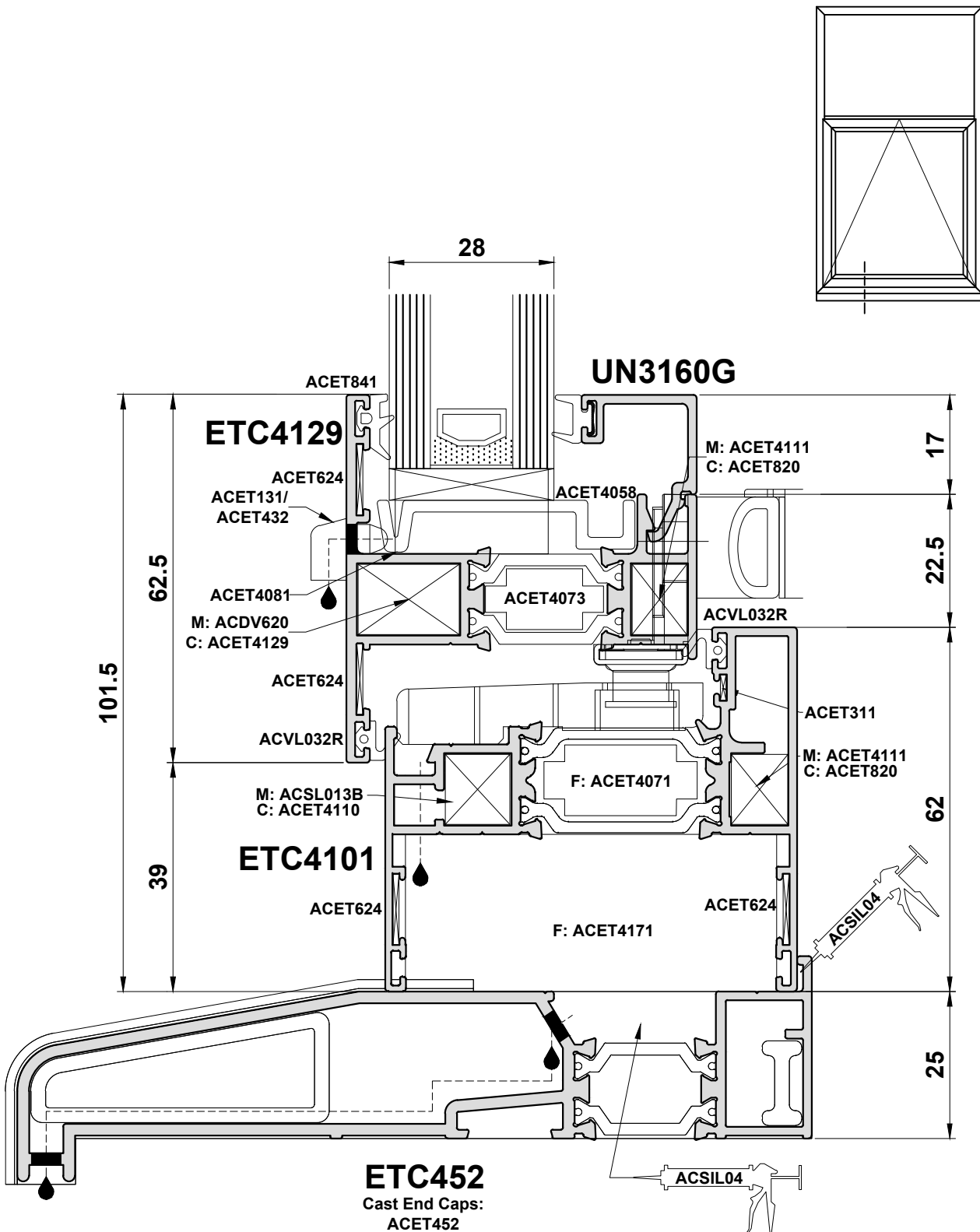
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Detail 8H



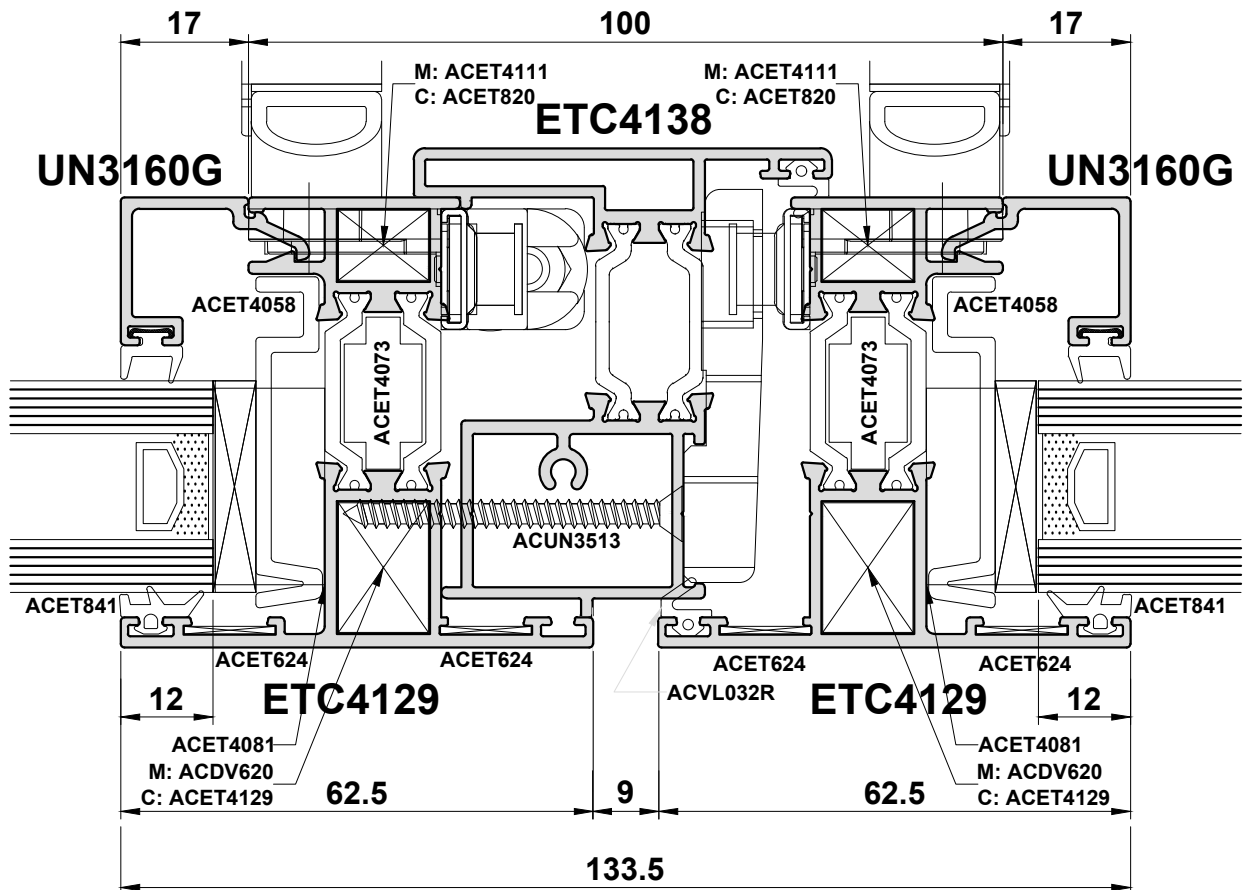
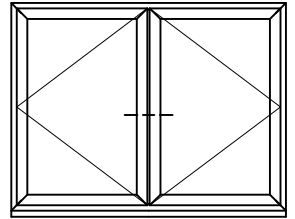
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Detail 8I



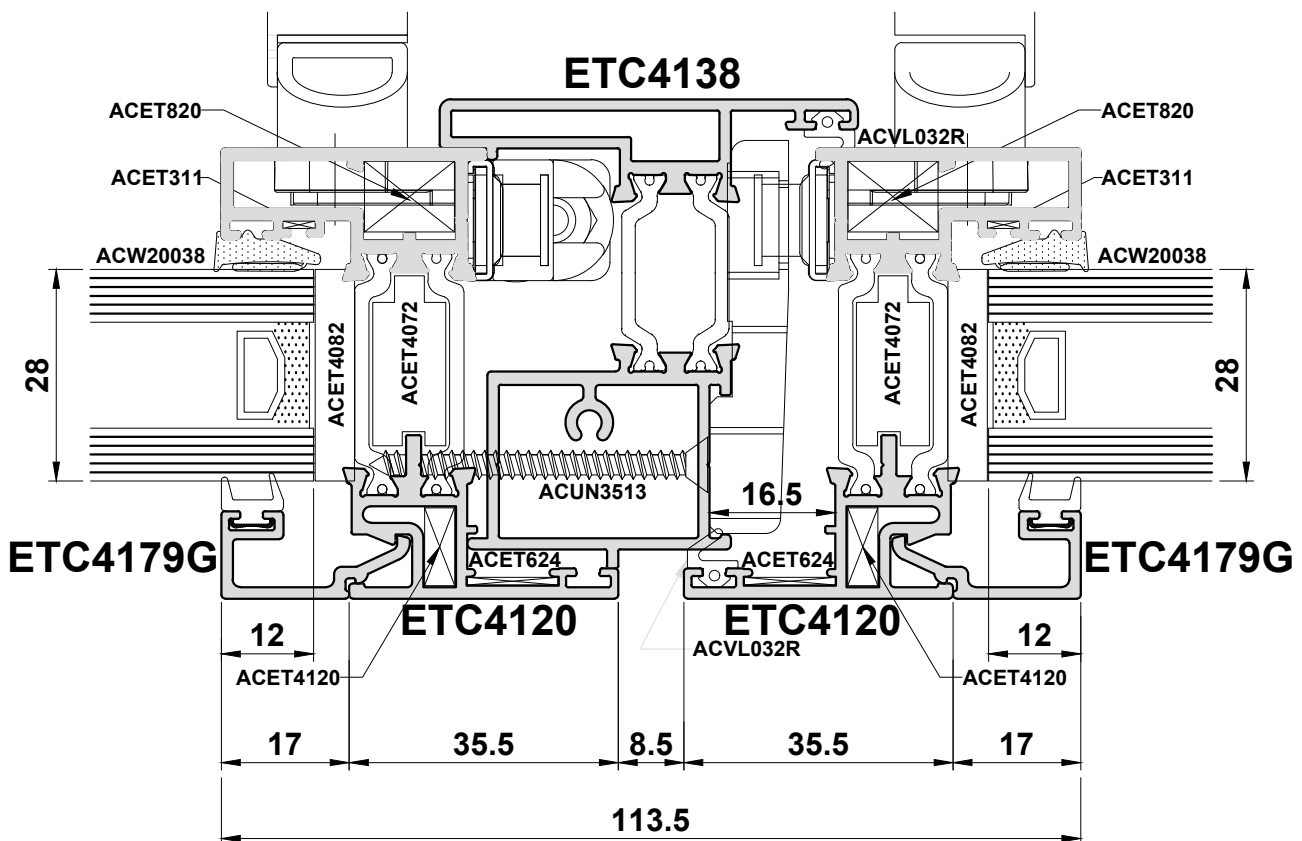
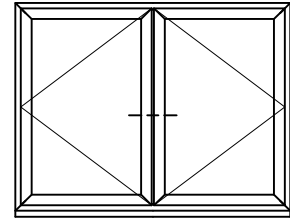
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Detail 9A

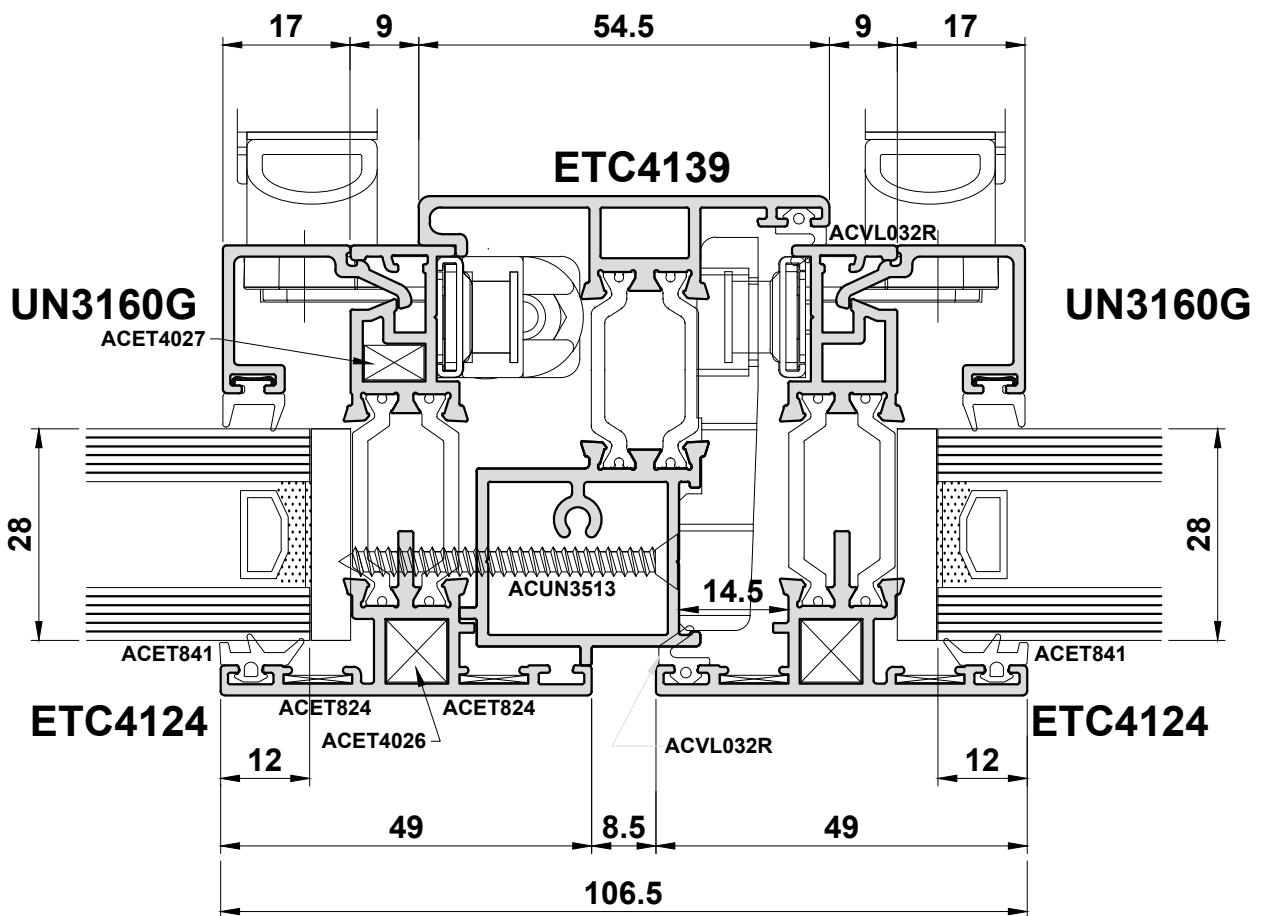
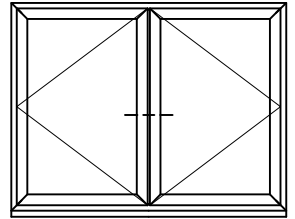


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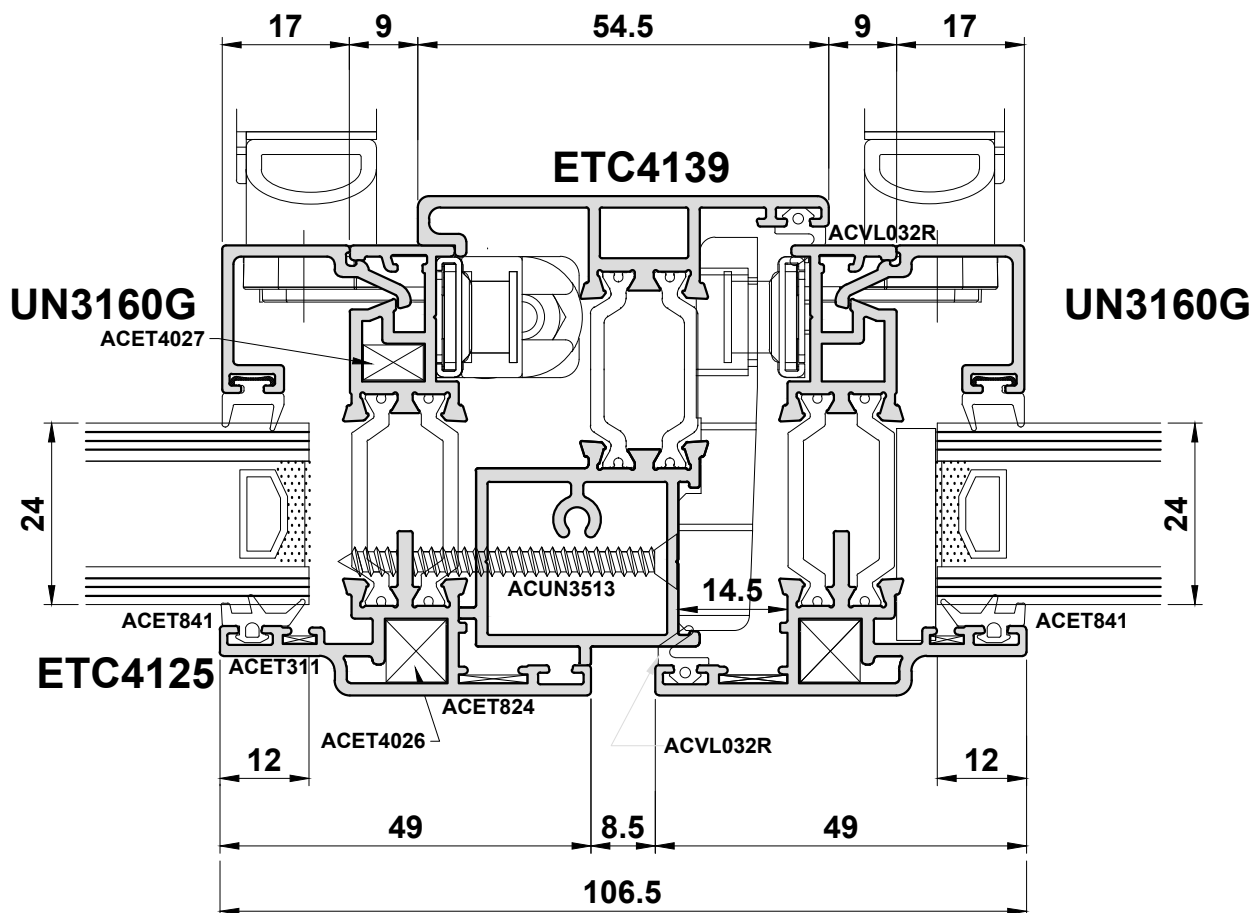
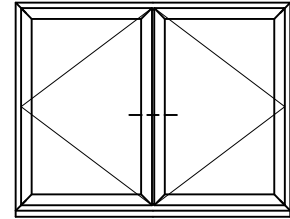
Detail 9B



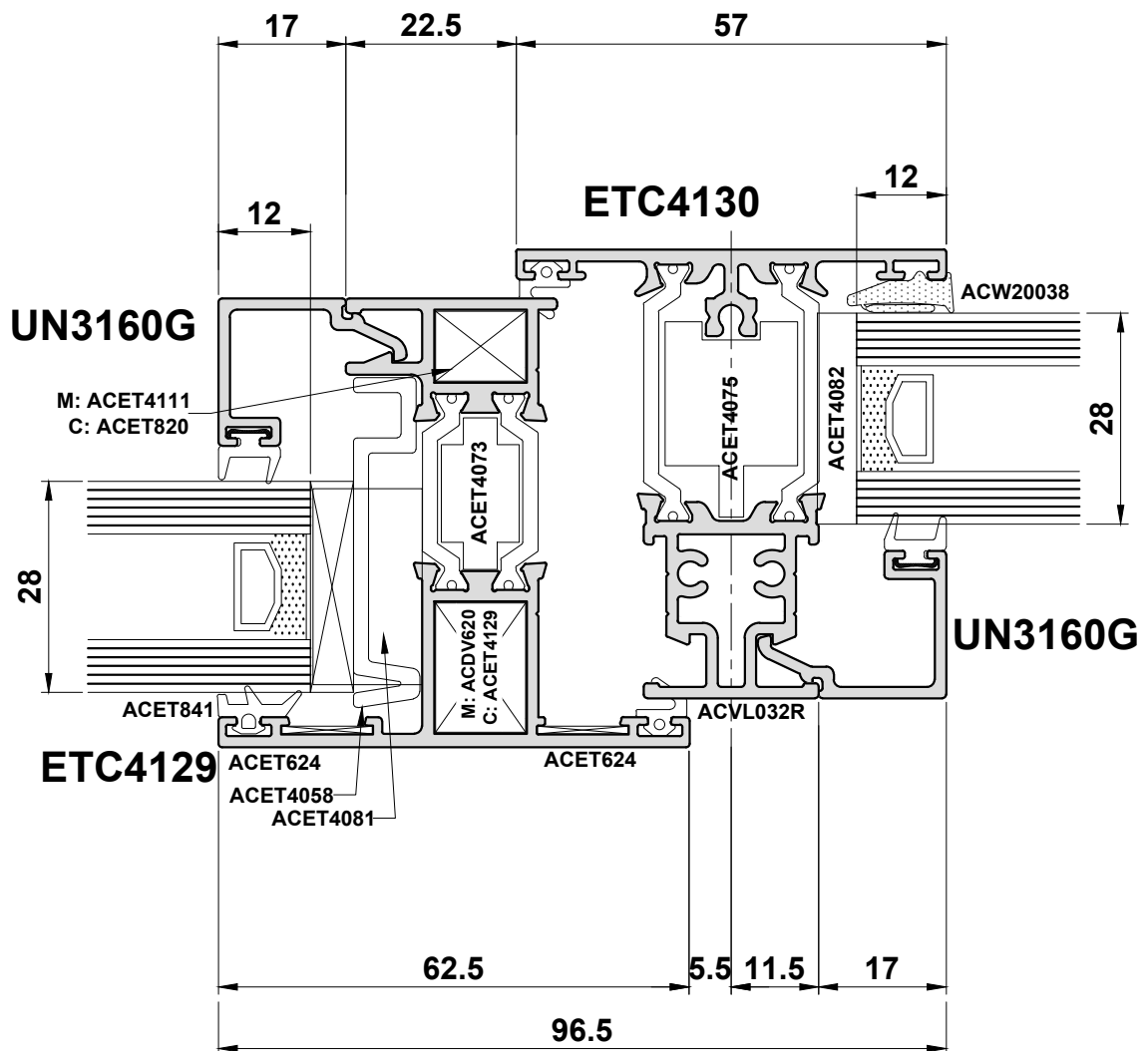
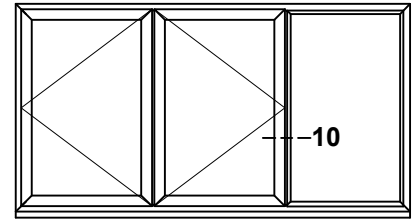
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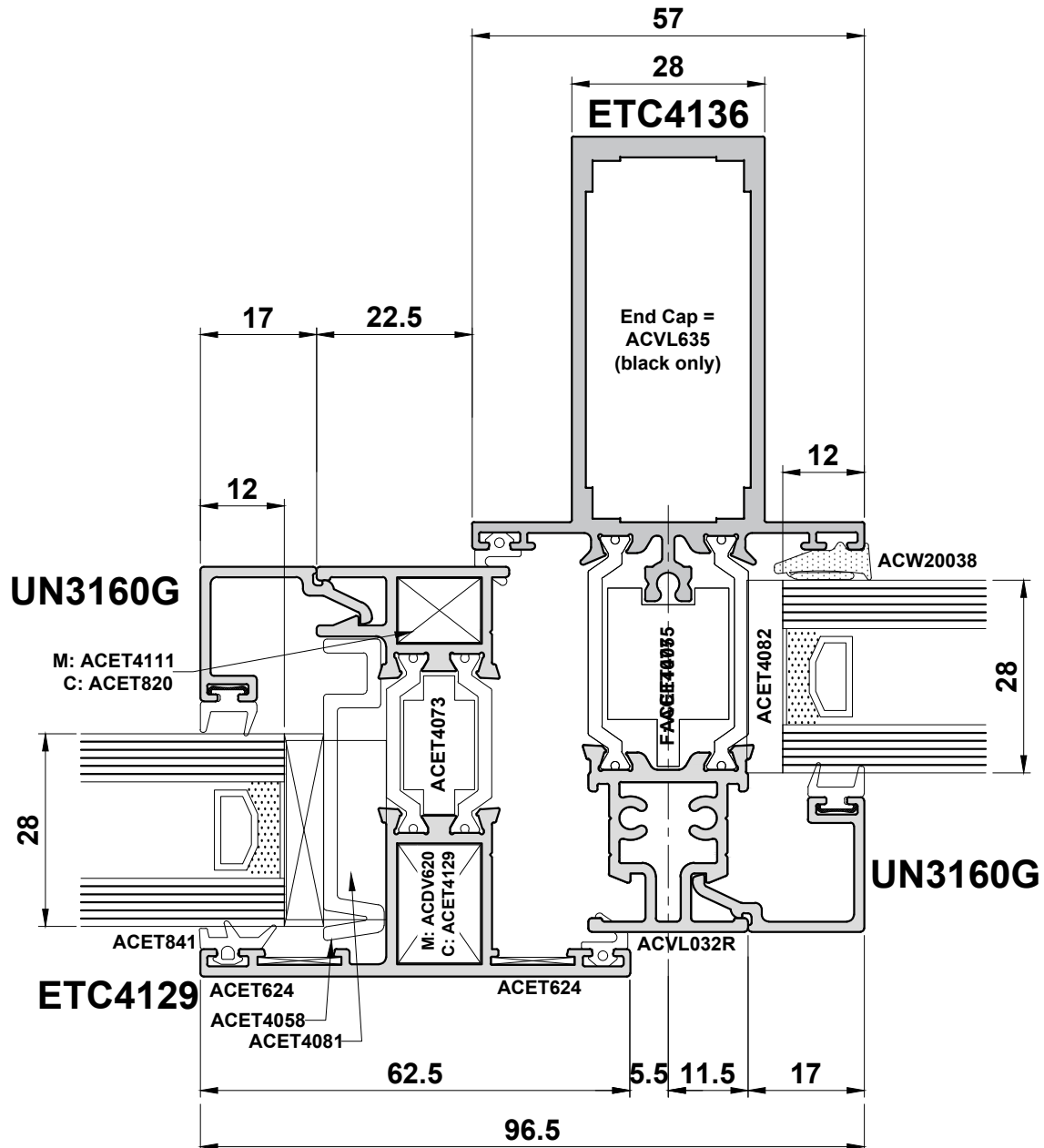
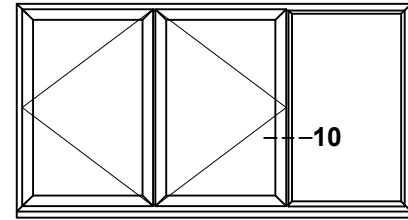
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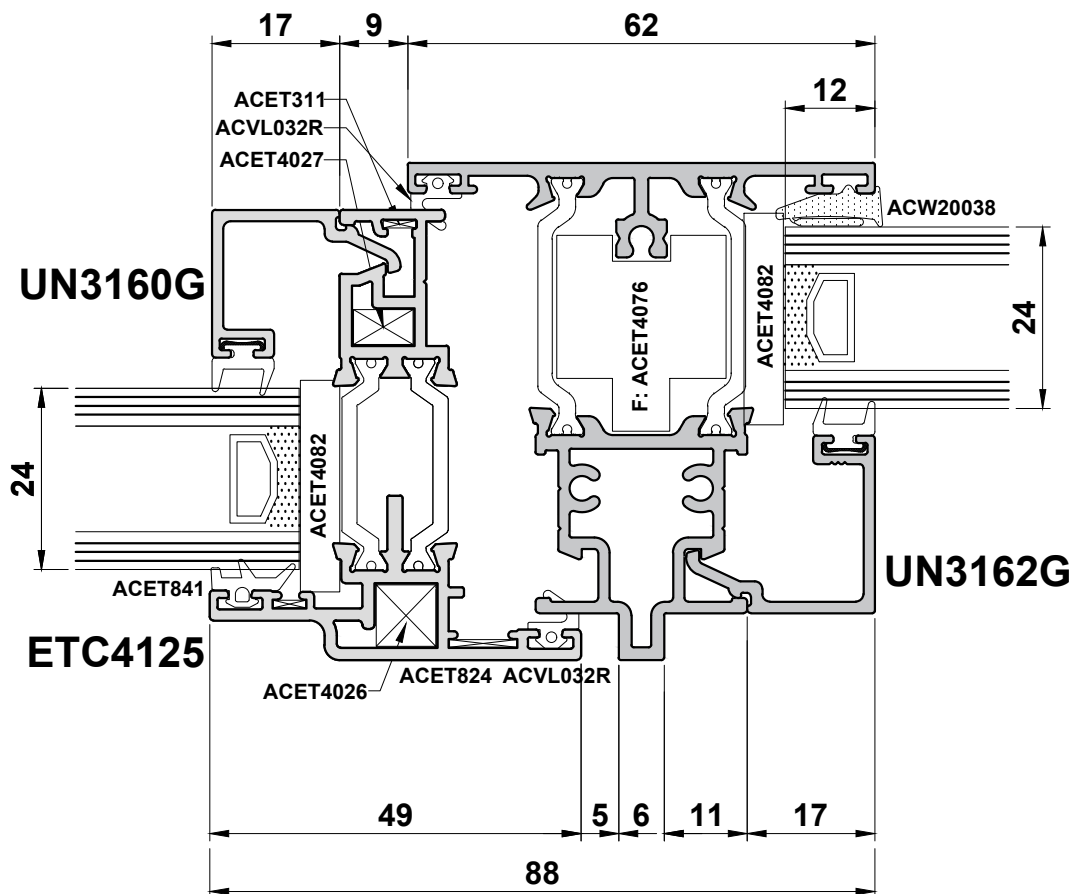
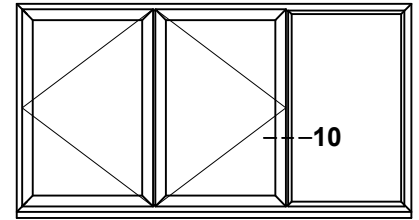
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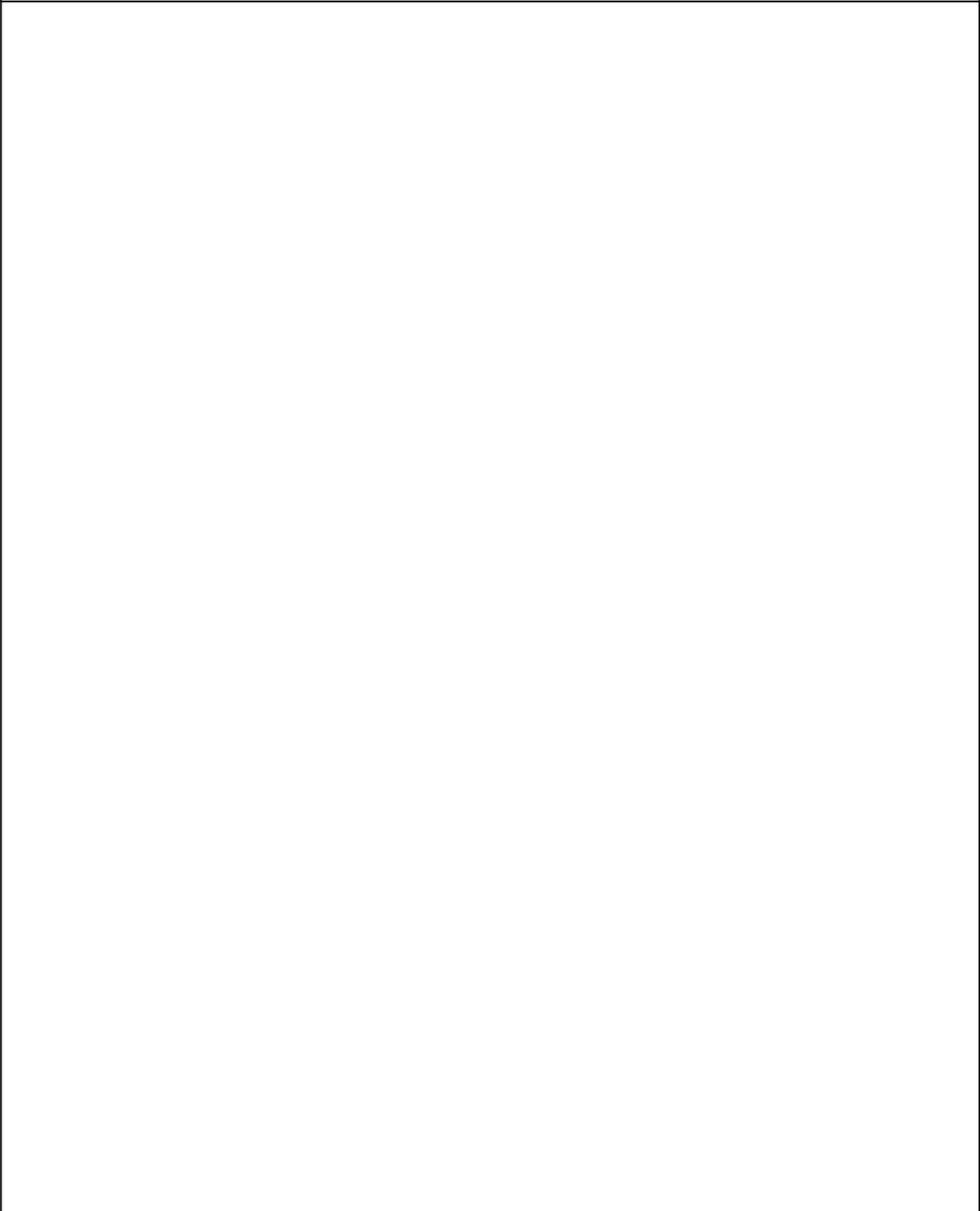
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Do Not Scale From This Drawing



Do Not Scale From This Drawing



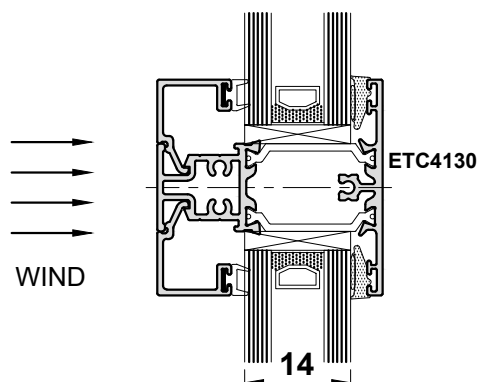
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Section D

Statics

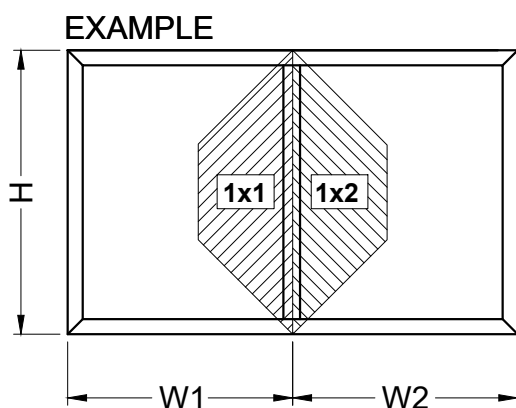
**General Size Limitations are shown on Page A06.
Please also consider maximum limits of accessories.**

**For Wind Loading Limitations, Please Contact
The Technical Department - T: 01934 833100**



The position of the axes is an indication for the use and application of the moments of inertia (I_x and I_y) and the section modulus (W_x and W_y). We always choose the values of the axis perpendicular to the load to resist it.

- To resist the wind loads we use the values I_x and W_x .



$H = 175\text{cm}$

$W1 = 120\text{cm}$

$W2 = 100\text{cm}$

$P = 1250\text{ Pa}$ (wind pressure)

- 1) Determine I_{xx} value for the stiles (if required) using the Specification Wizard

$I_{xx} = 21.0\text{ cm}^4$

- 2) Determine suitability



Number	Picture	$I_x(\text{cm}^4)$ $W_x(\text{cm}^3)$	$I_y(\text{cm}^4)$ $W_y(\text{cm}^3)$
ETC4130		19.39	4.66
		5.84	1.63
ETC4135		23.74	6.51
		6.30	2.11
ETC4136		95.03	9.13
		15.97	3.21

Section E



Construction Drawings

Corner Joint Details..... E03 - E05

ACET963R & ACET4950 Punch Tools..... E06

Variable angle Cleats..... E07

Bead Notching ACDV916..... E08

Drainage..... E09 - E11

Angled Sub Cill..... E12

Transom/Mullion Fixing Details..... E13 - E18

ETC4132 & ETC4133 Dummy Transoms..... E19

Friction Hinge Details..... E20 - E22

ACET4050 Hinge Details..... E23

Locking Details..... E24 - E26

French Casement Assembly..... E27 - E28

Glazing Details..... E29 - E37

Bay Pole Options..... E38 - E43

Horizontal Coupler Details..... E44

Fixing Strap Details..... E45

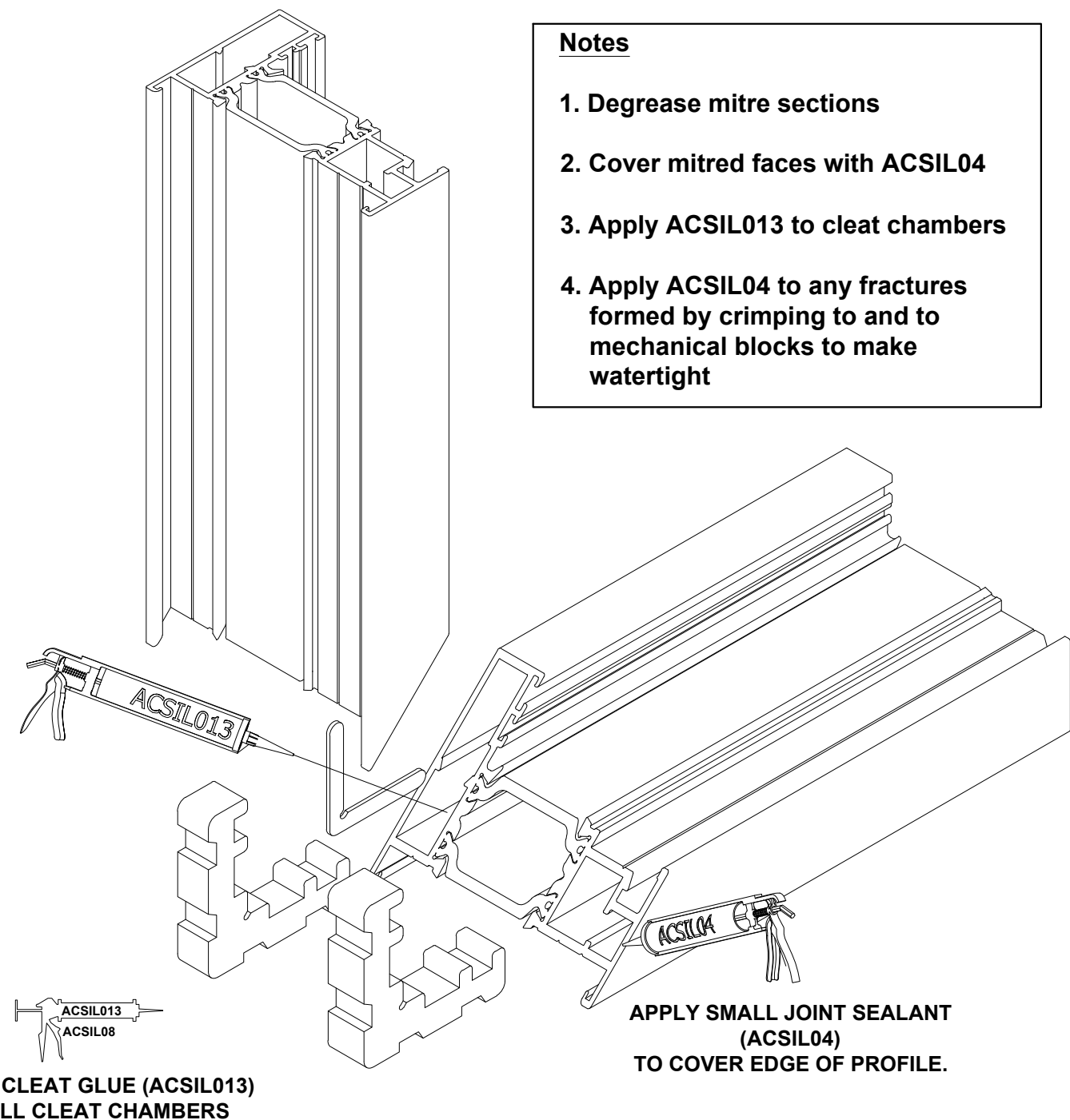
Trickle Vent Details..... E46

Corner Joint Details

To ensure accurate corners, we recommend the use of support blocks (by others) whilst cutting. Do NOT clamp directly onto the polyamide.

Table 1

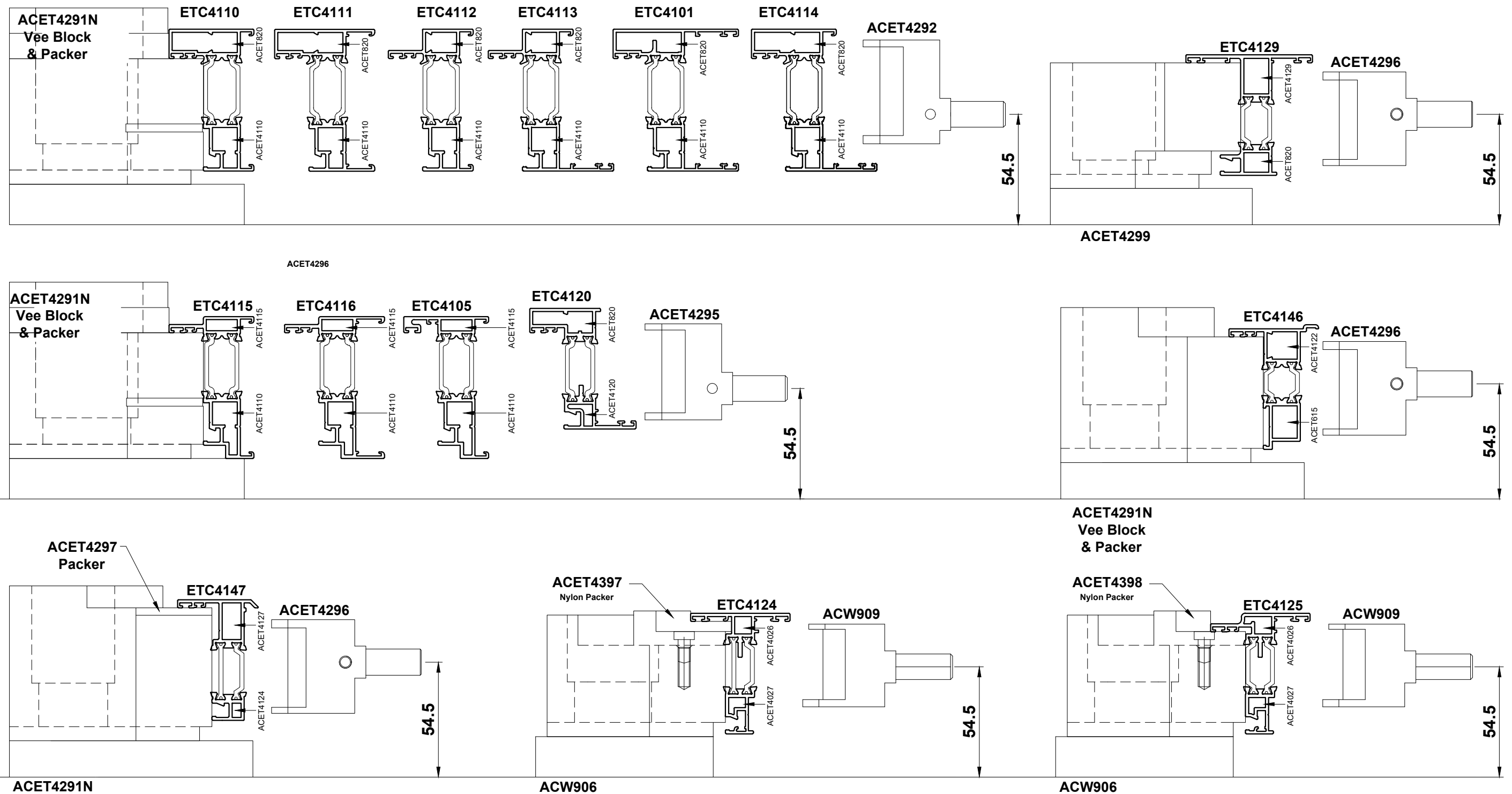
KL Colour	Sealant Part Number
Black	ACSIL04BL
White	ACSIL04WP
Clear	ACSIL04CL
KL001	ACSIL04KL001
KL002	ACSIL04KL002
KL003	ACSIL04KL003
KL004	ACSIL04KL004
KL005	ACSIL04KL005
KL006	ACSIL04KL006
KL007	ACSIL04KL007
KL010	ACSIL04KL010
KL011	ACSIL04KL011
KL012	ACSIL04KL012
KL013	ACSIL04KL013



Do Not Scale From This Drawing

Corner Crimping without Integrated Gasket

Manual Crimper = WUT024HSZA

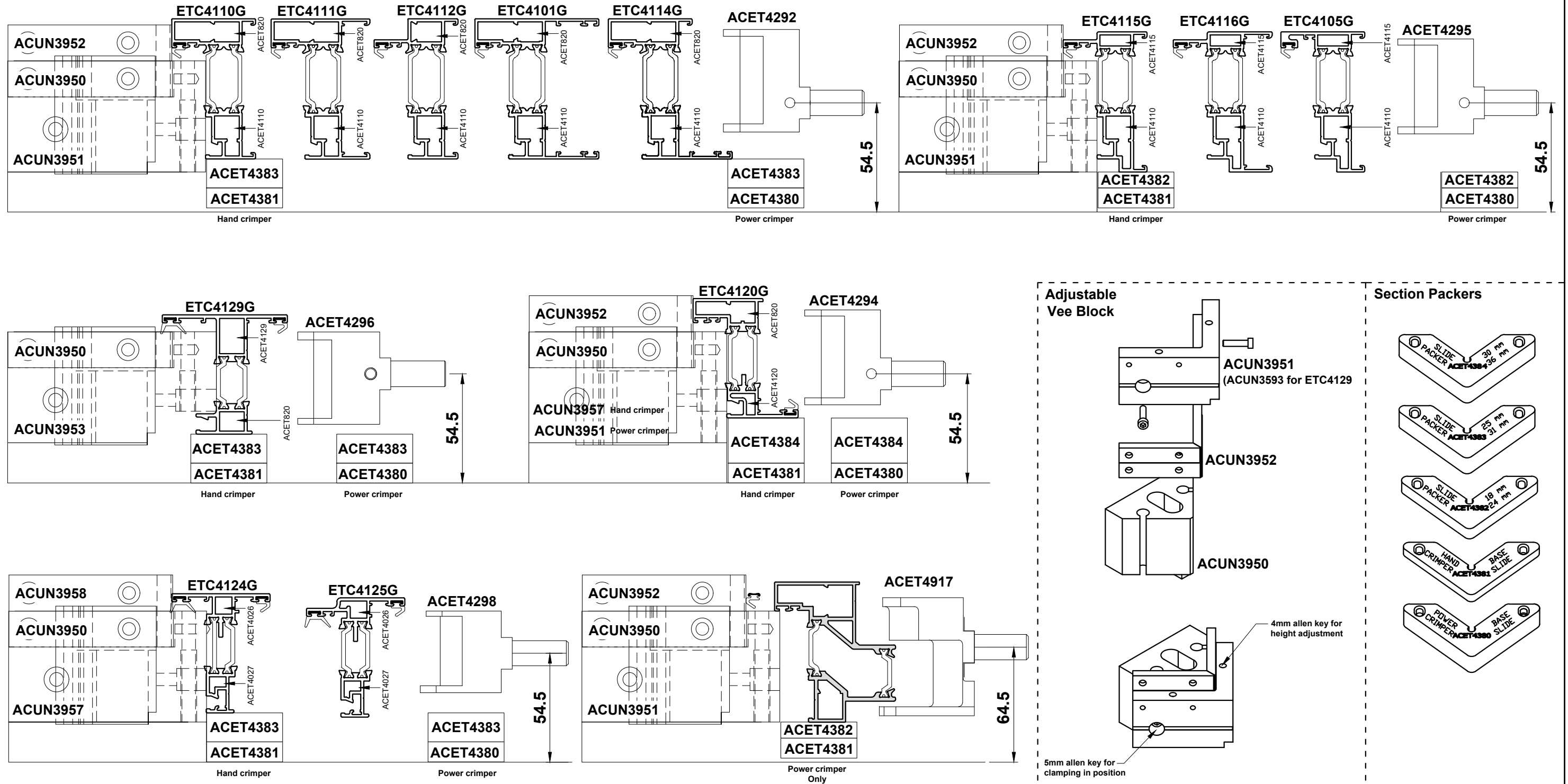


Do Not Scale From This Drawing

Corner Crimping with Integrated Gasket

Manual Crimper = WUT024HSZA

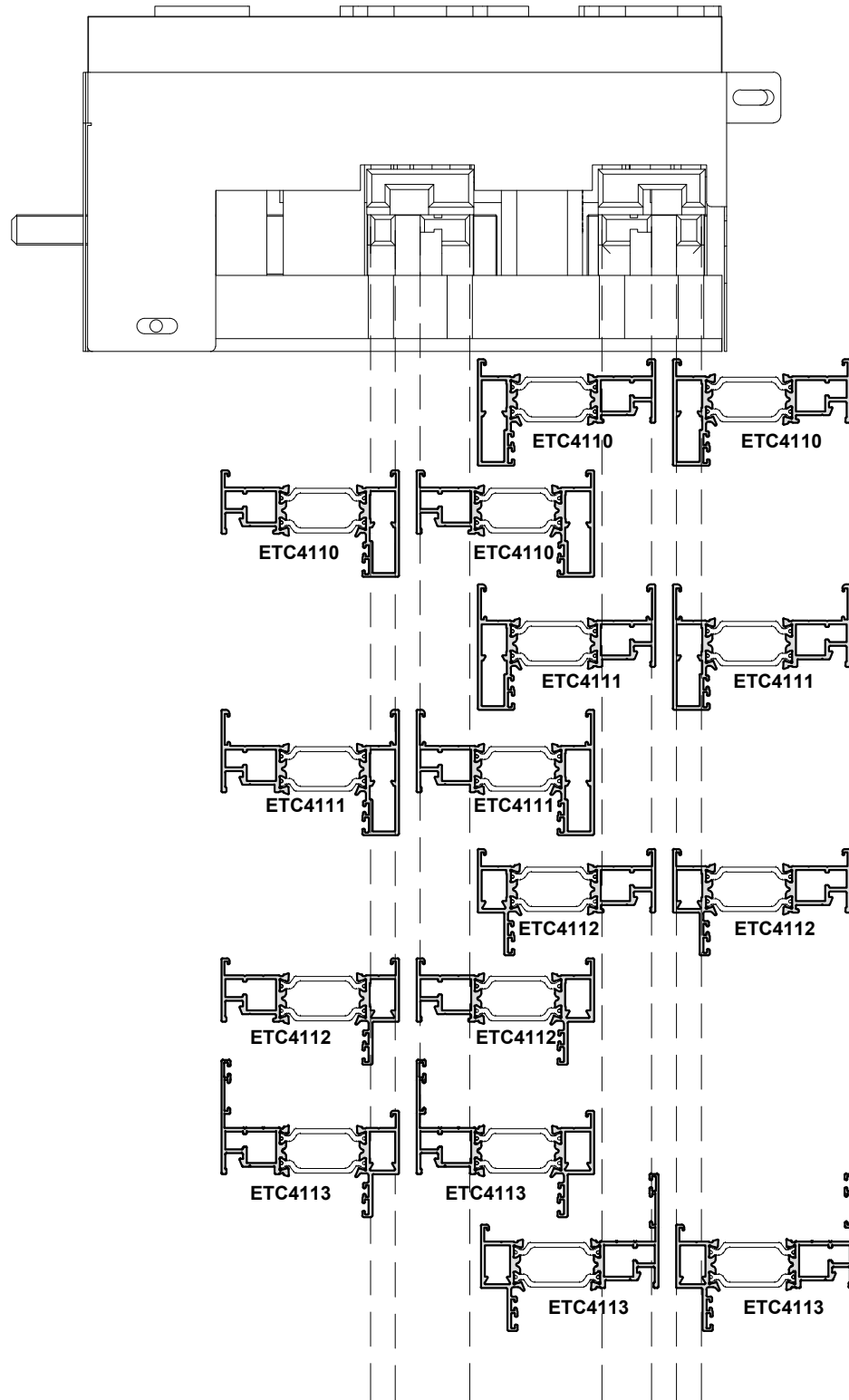
Power Crimper = ACCR100



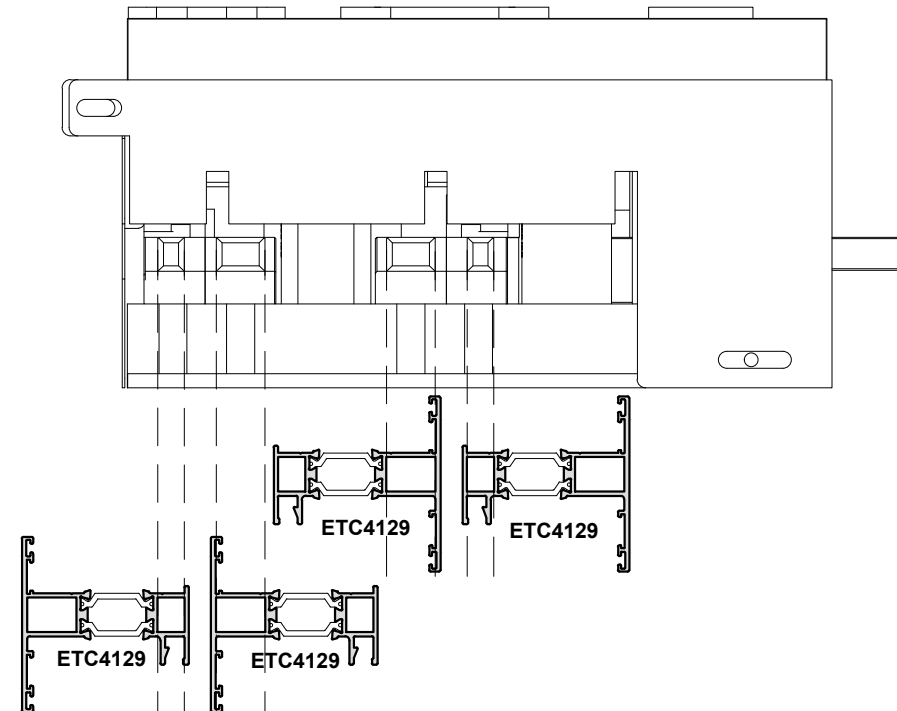
Do Not Scale From This Drawing

ACET963 Punch Tool

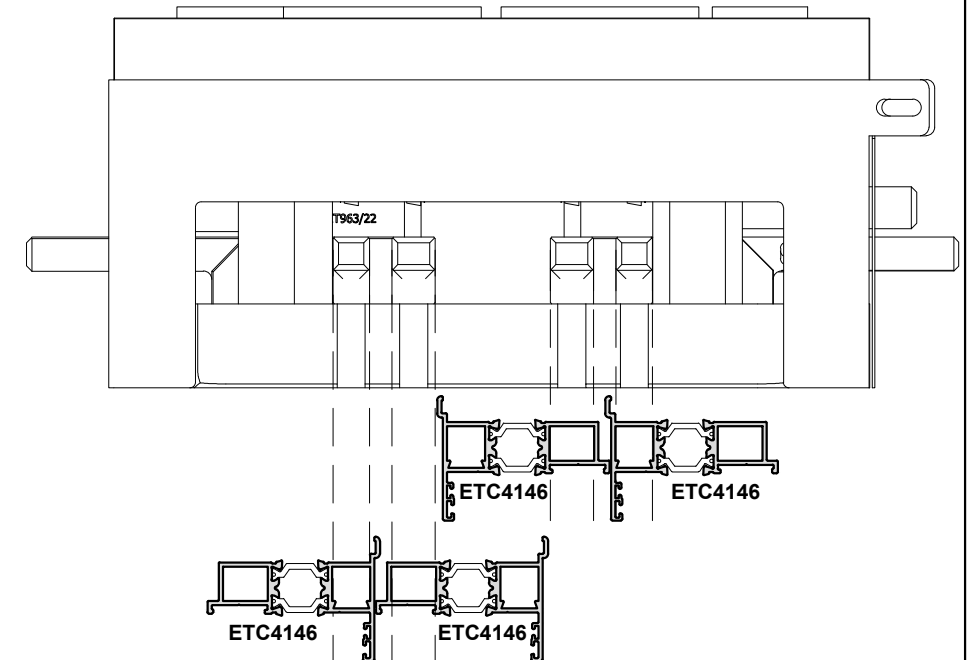
Station 1



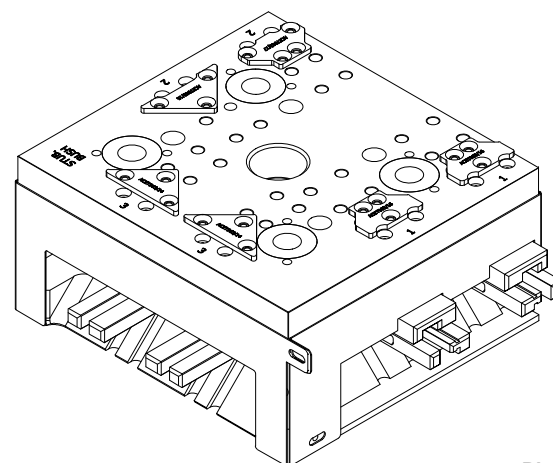
Station 2



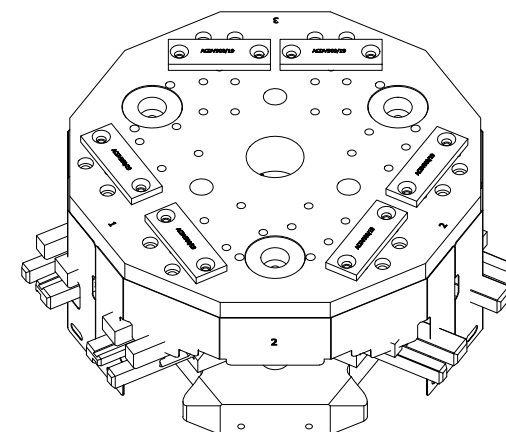
Station 3



ACET963R



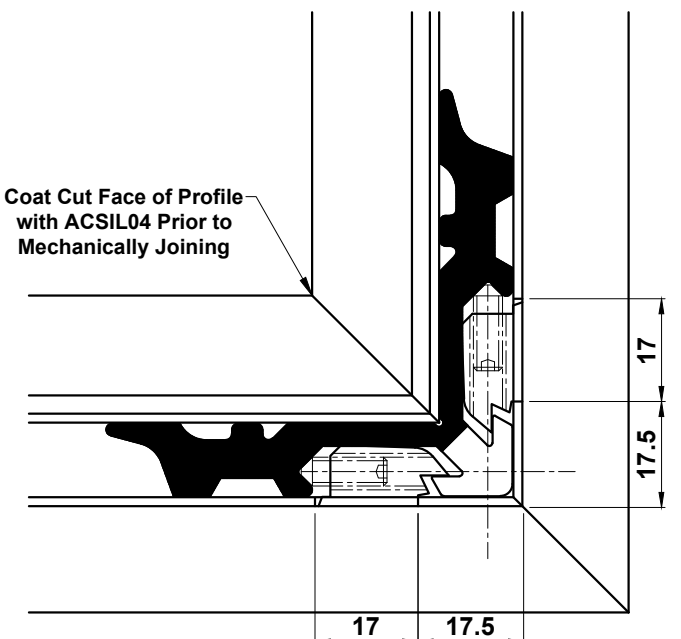
ACET4950



Please Note

The following profiles are not compatible with ACET963R or ACET4950:
ETC4101, ETC4105, ETC4114, ETC4115, ETC4116, ETC4117, ETC4120,
ETC4124, ETC4125, ETC4147

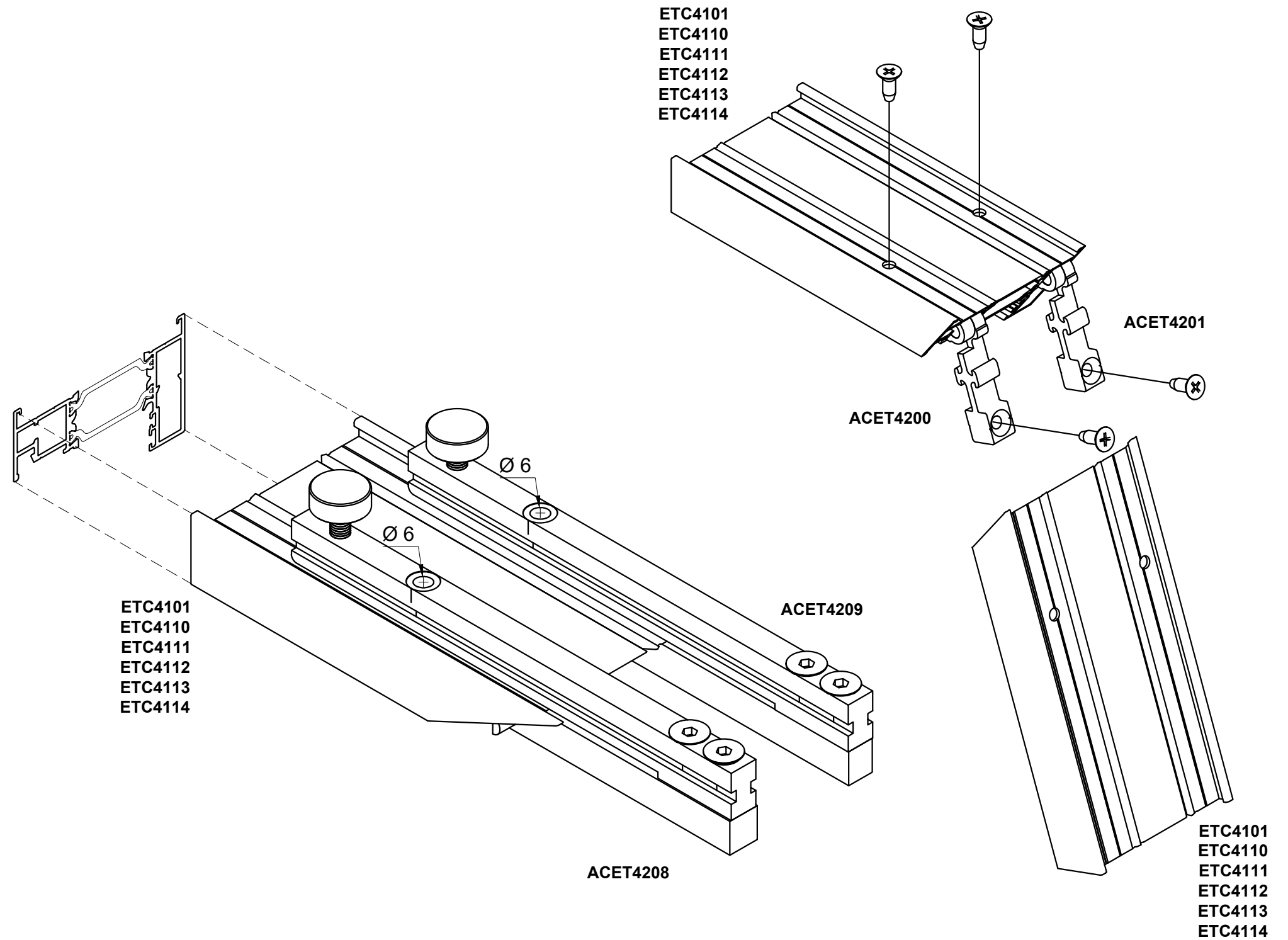
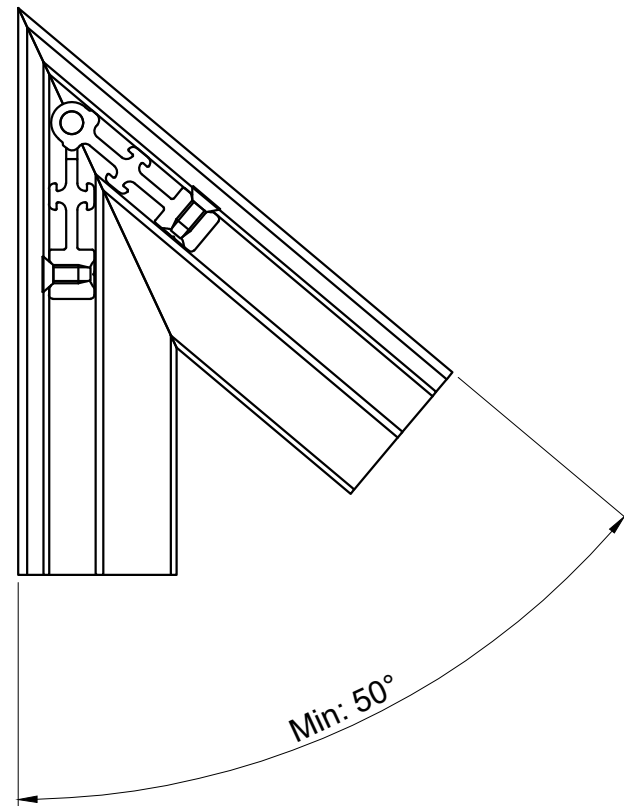
Coat Cut Face of Profile
with ACSIL04 Prior to
Mechanically Joining



Apply ACIL013 to all Cleat Apertures and apply ACSIL04 to
any fractures formed by crimping to make watertight

Do Not Scale From This Drawing

Variable Angle Cleats



Do Not Scale From This Drawing

Bead Notching ACDV916

LOCK SELECTION NOTES:

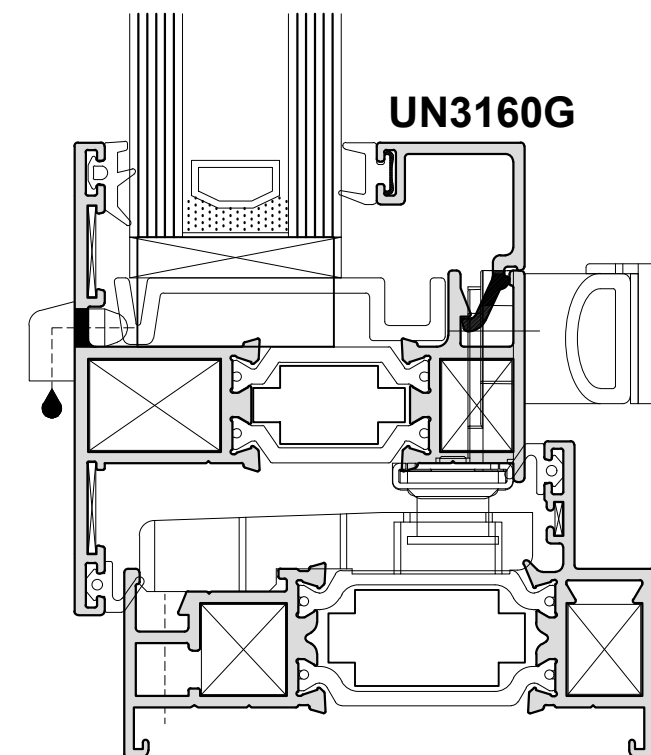
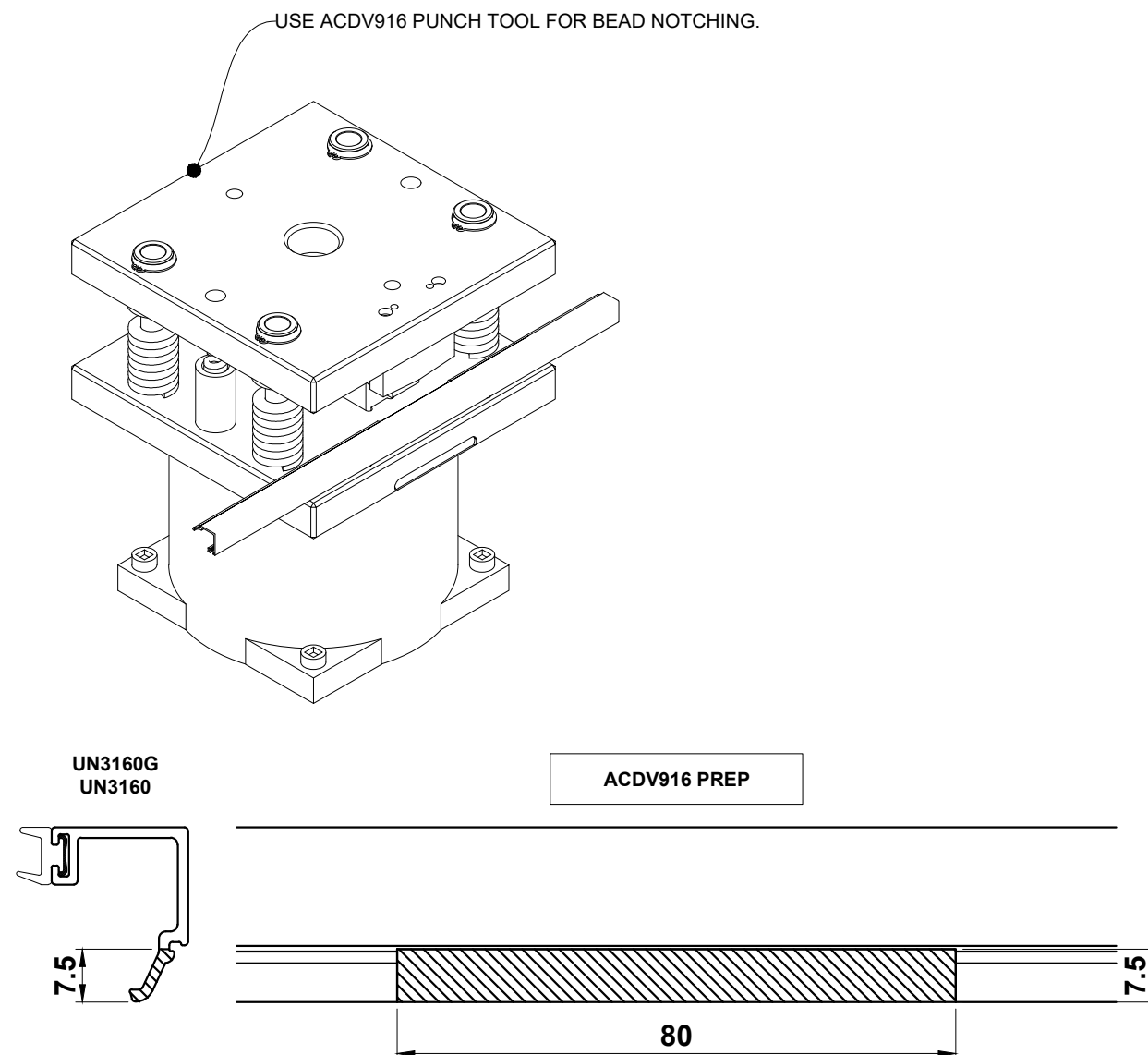
PLEASE FOLLOW TABLE ON PAGE E06 FOR LOCK SELECTION OPTIONS.

ALL SASH / LOCK COMBINATIONS REQUIRE BEAD NOTCHING.

ALL OTHER INTERMEDIATE SHOOTBOLT COMBINATIONS REQUIRE BEAD NOTCHING.

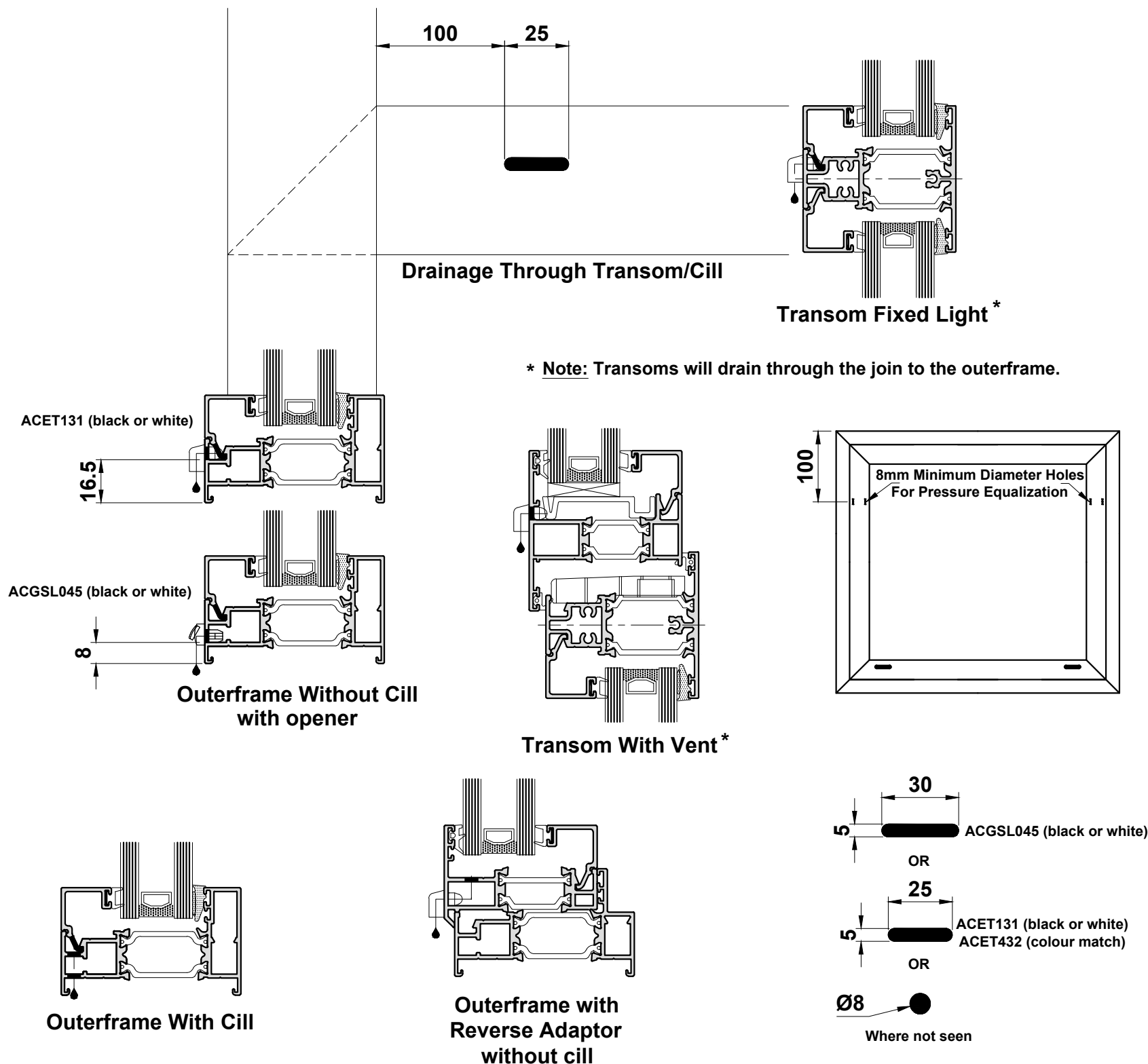
ALL LOCKS & SASHES HAVE BEEN TESTED TO PAS24:2016. PLEASE FOLLOW PAS24:2016 FABRICATION INSTRUCTIONS AND LIMITATIONS.

USE ACDV916 PUNCH TOOL FOR BEAD NOTCHING.



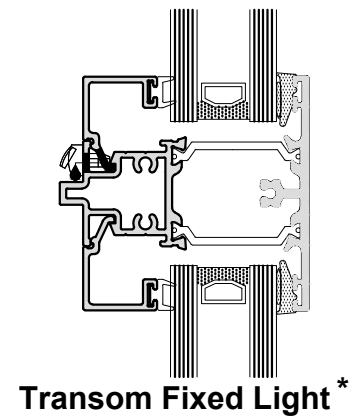
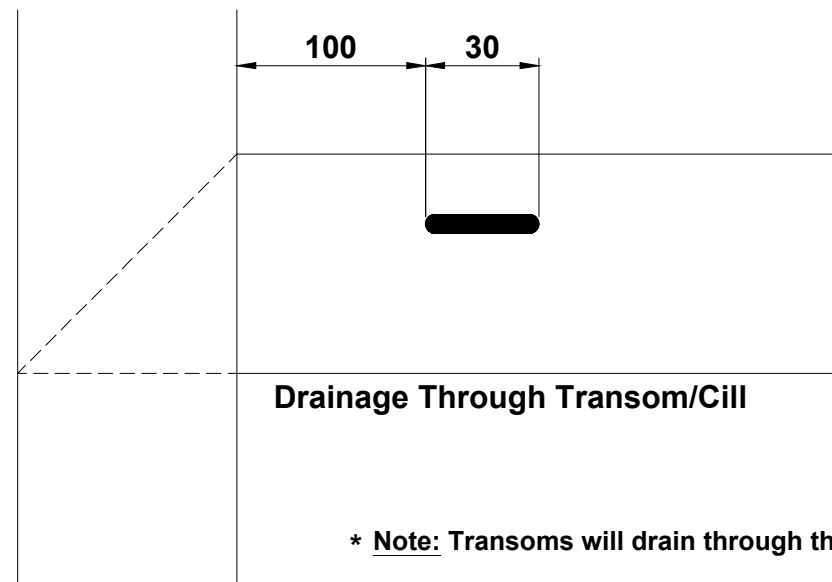
Do Not Scale From This Drawing

Drainage

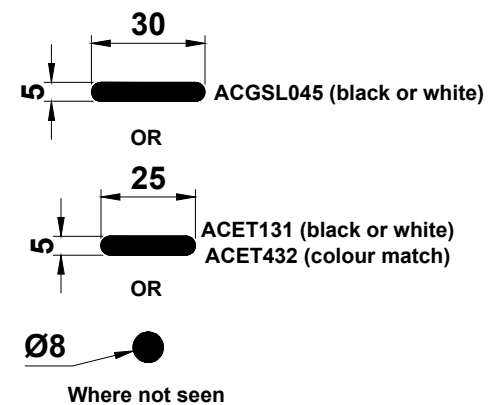
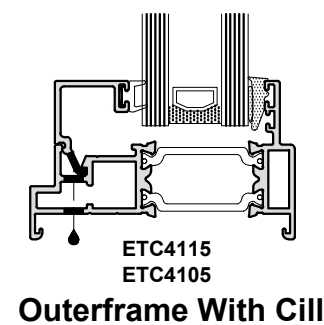
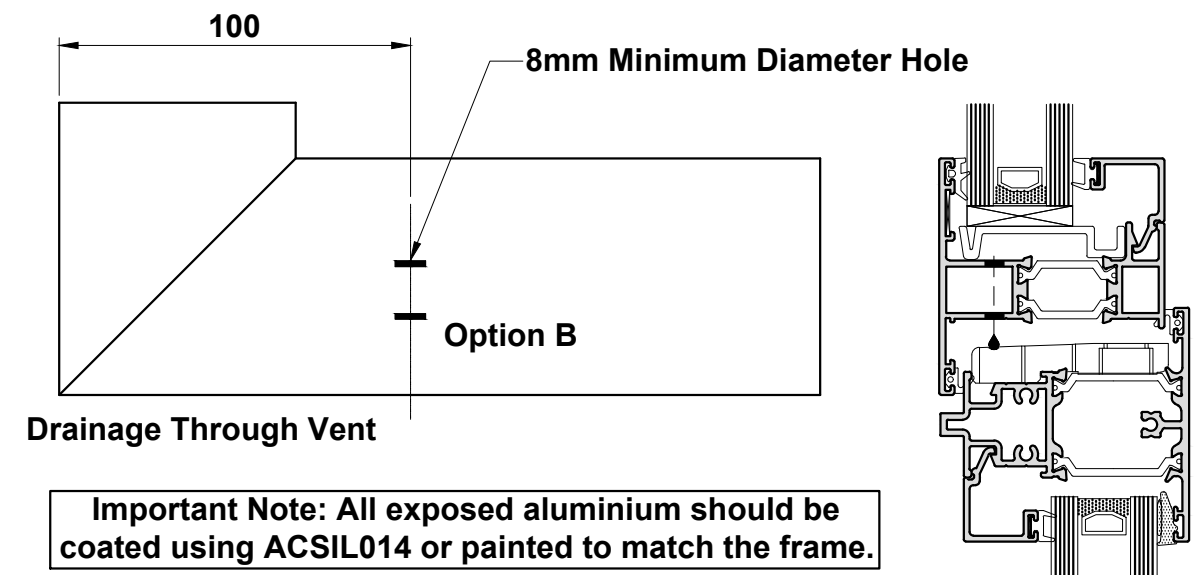
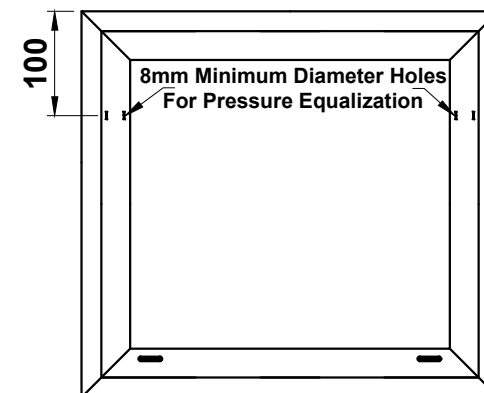
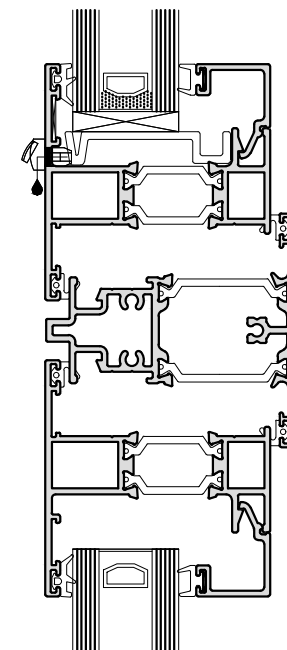
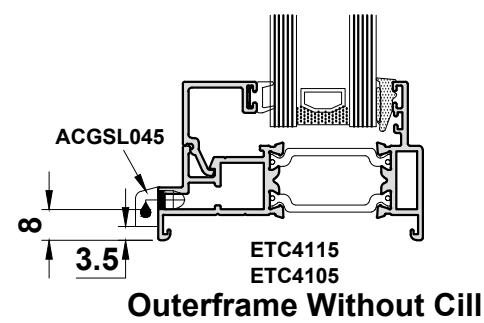
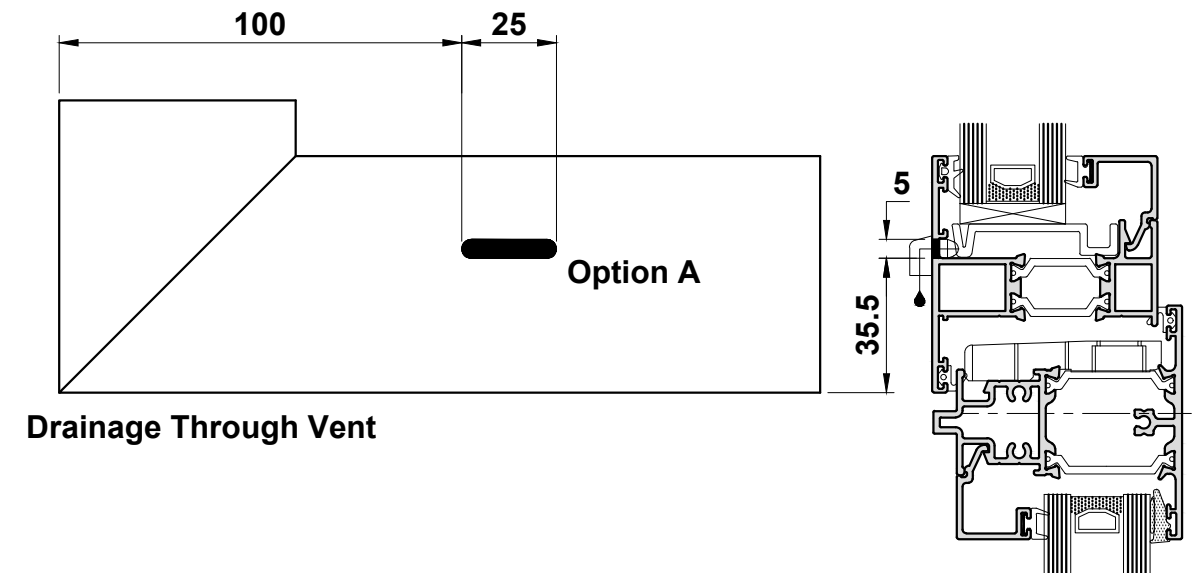


Important Note: All exposed aluminium should be coated using ACSIL014 or painted to match the frame.

Flush Casement Drainage



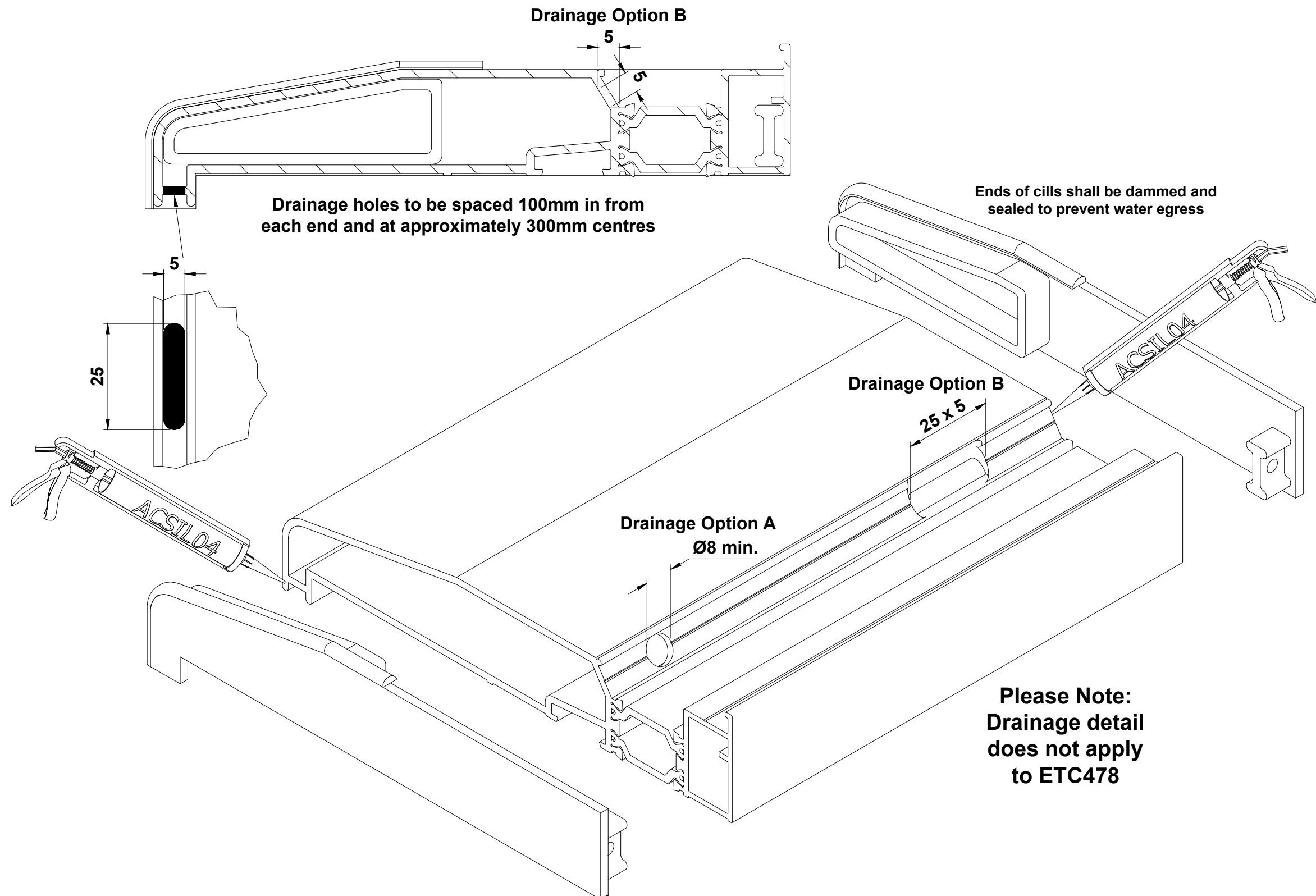
* **Note:** Transoms will drain through the join to the outerframe.



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

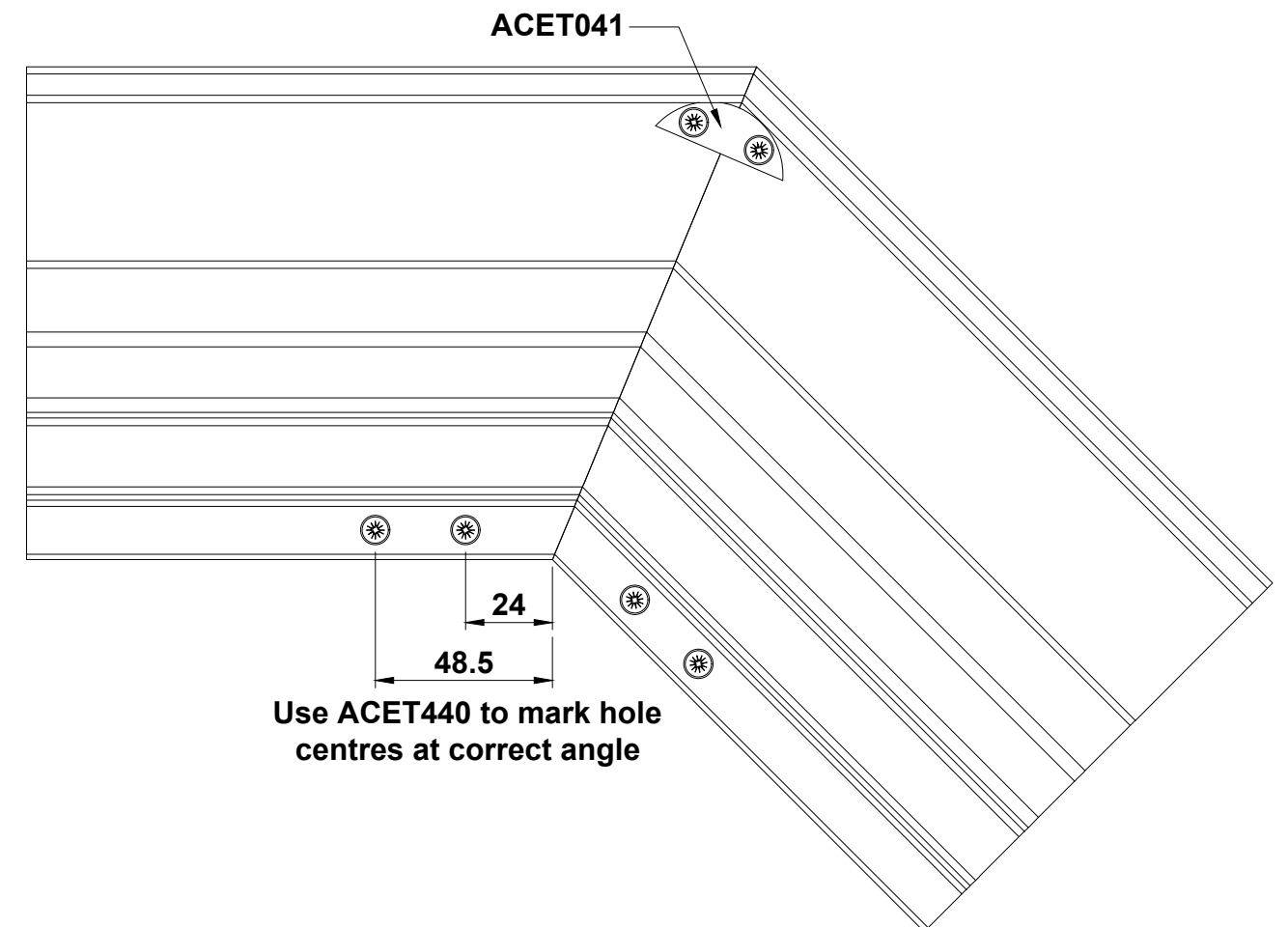
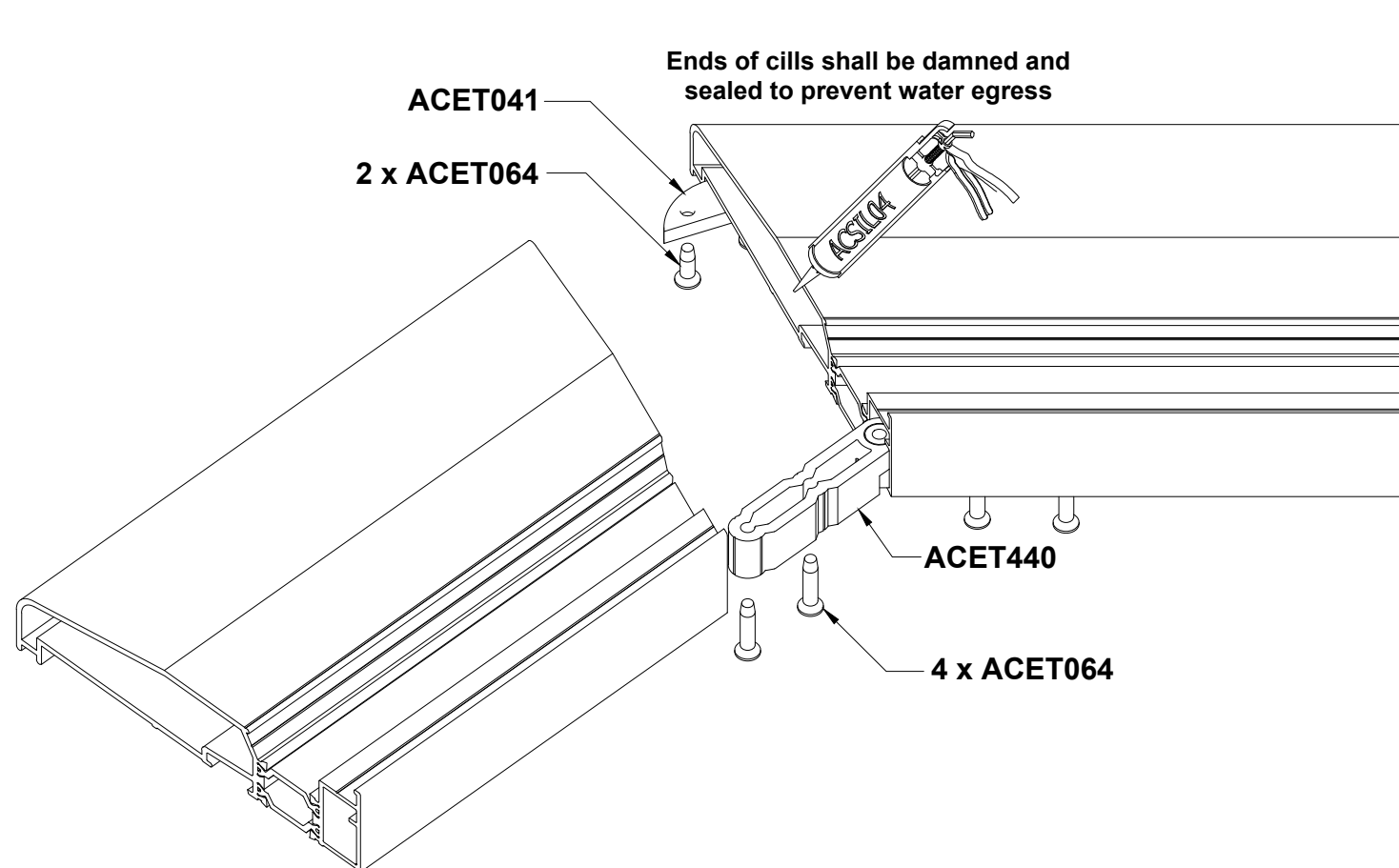
Do Not Scale From This Drawing

Sub Cill Drainage



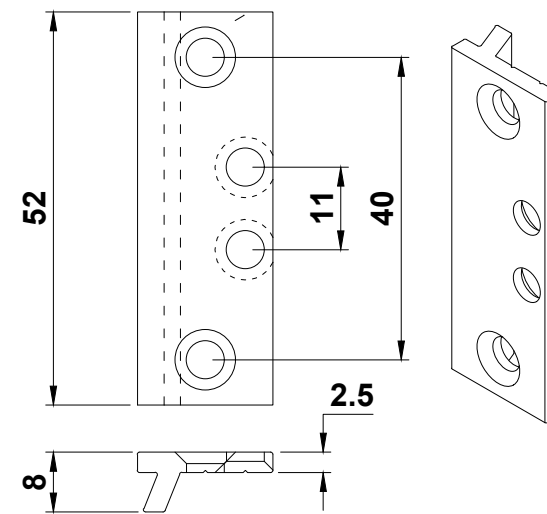
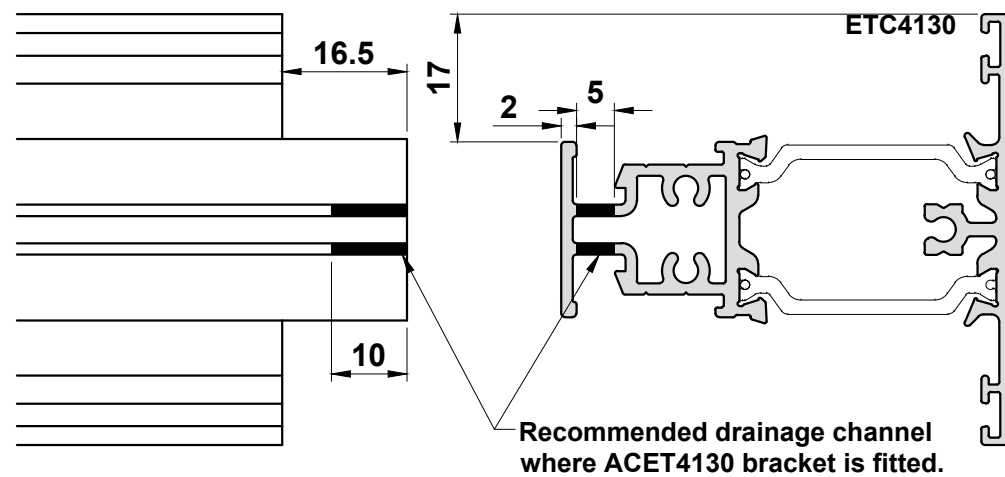
Do Not Scale From This Drawing

Angled Sub Cill

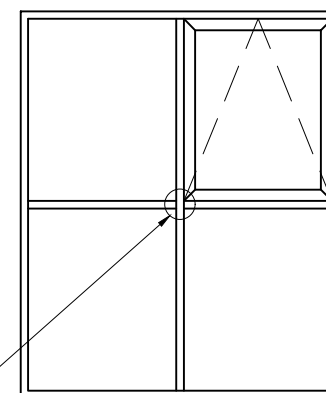
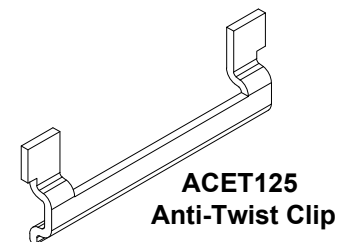


Do Not Scale From This Drawing

ETC4130 Mullion/Transom Detail



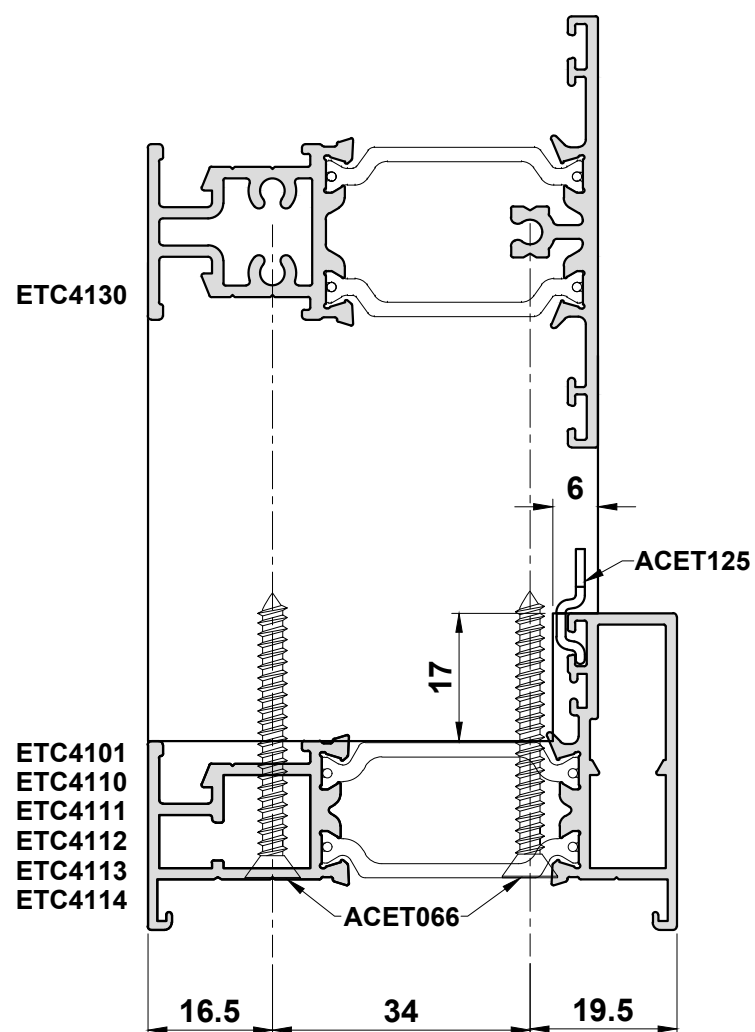
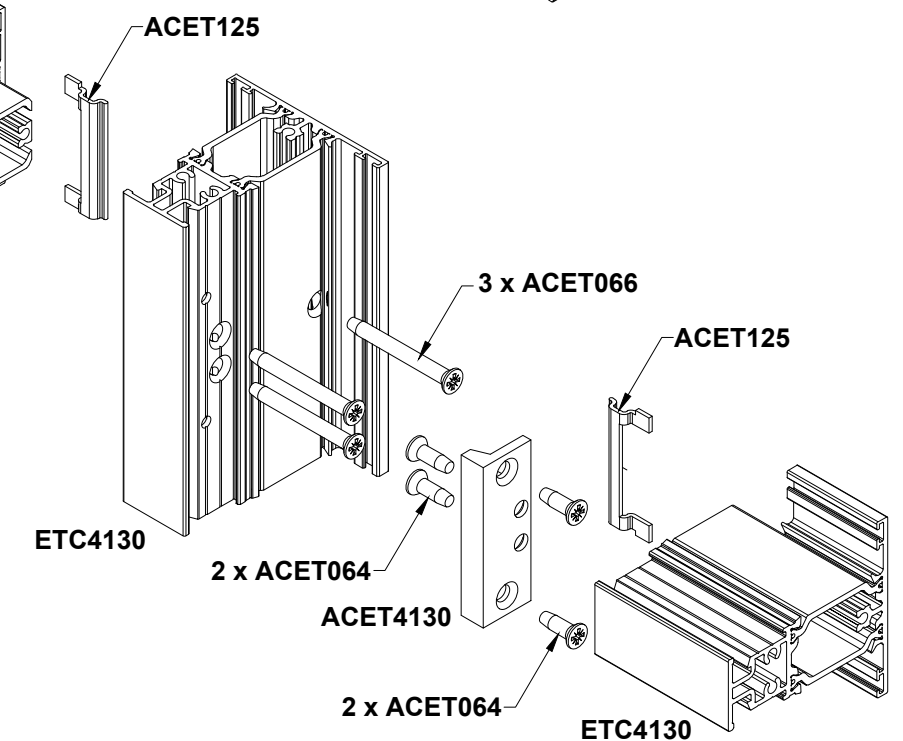
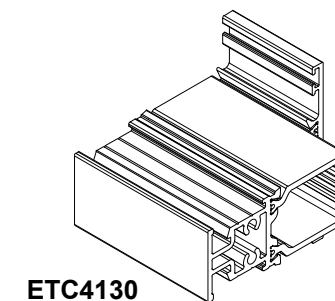
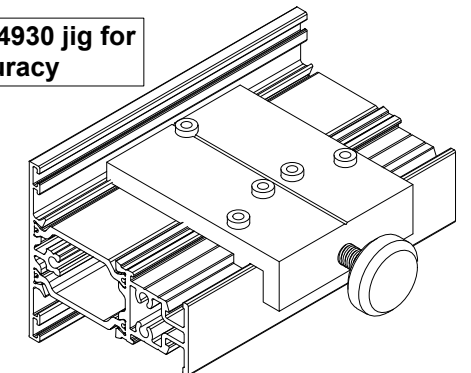
ACET4130
Cruciform Bracket



Important Fabrication Note:
All joints shall be sealed using ACSIL04



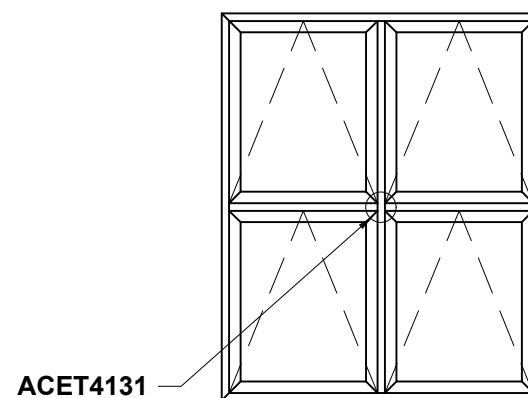
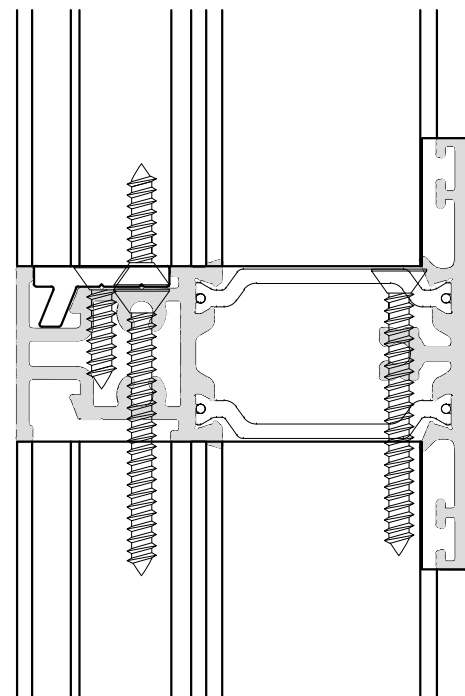
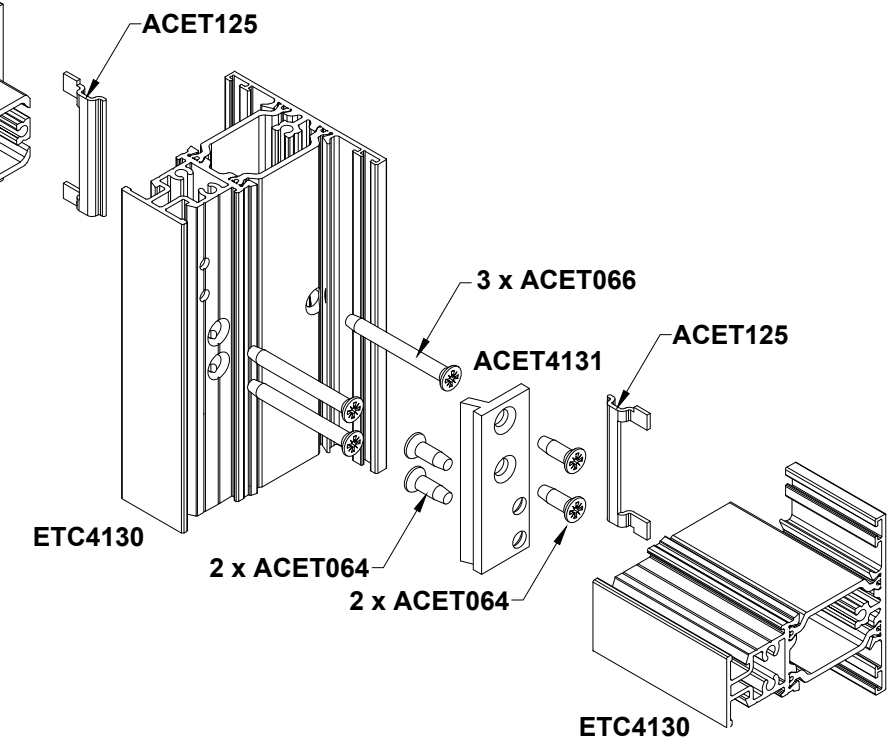
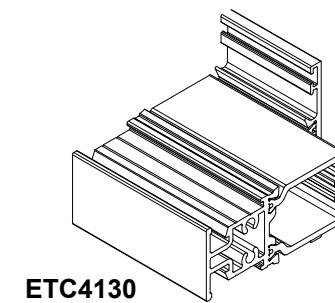
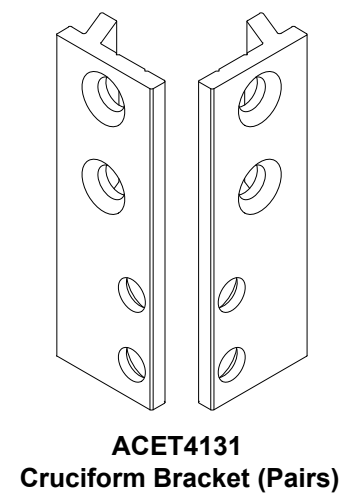
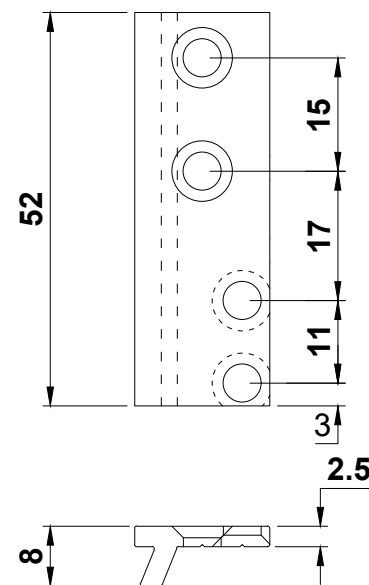
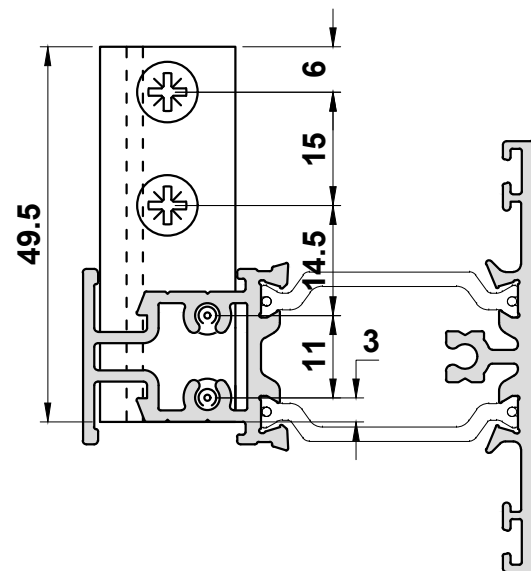
Use ACET4930 jig for accuracy



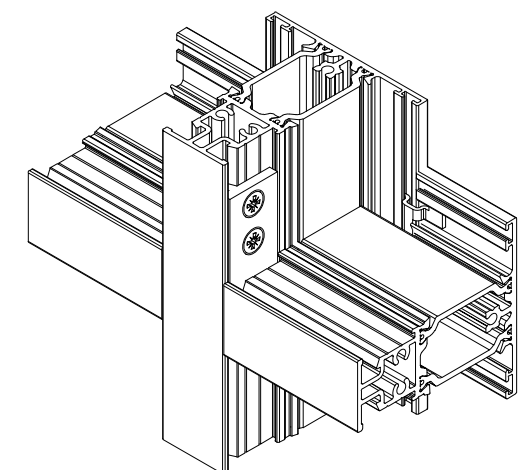
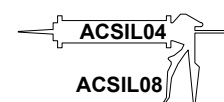
Drainage

Do Not Scale From This Drawing

ETC4130 Mullion/Transom Detail

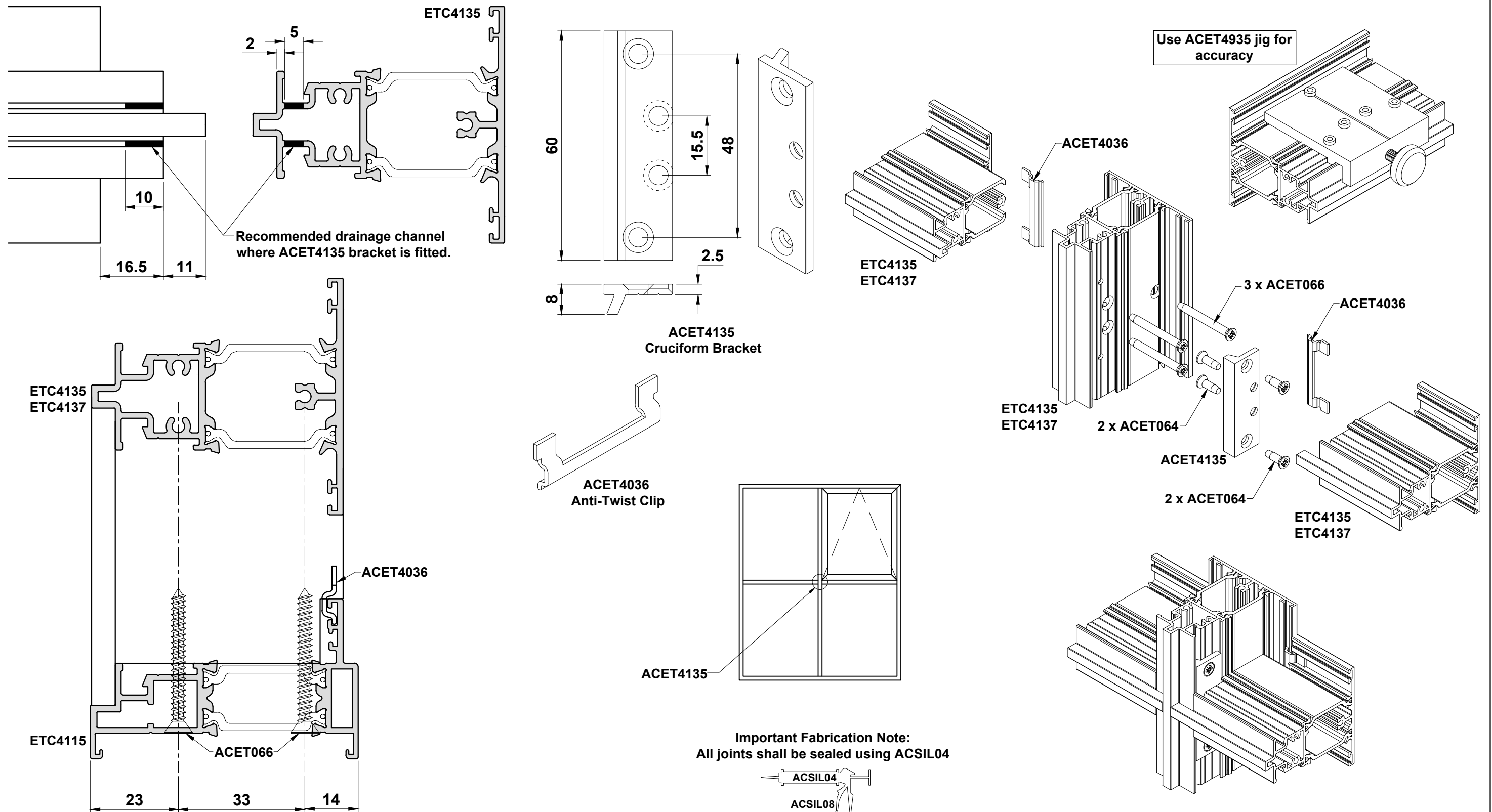


Important Fabrication Note:
All joints shall be sealed using ACSIL04



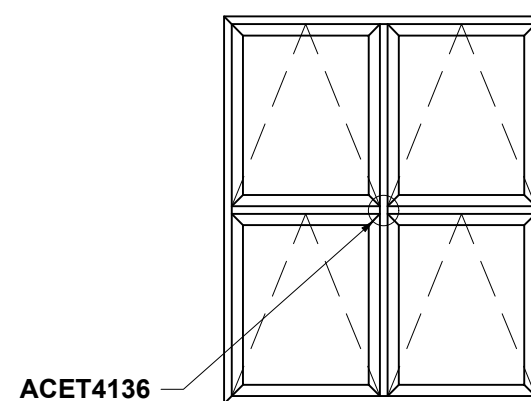
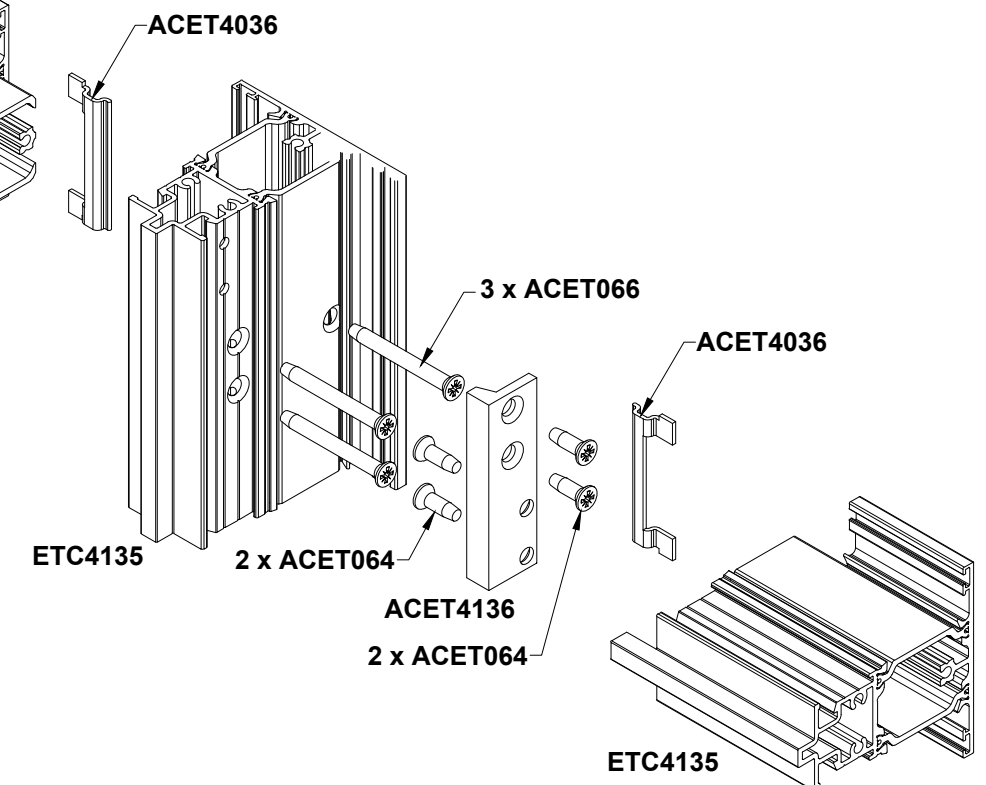
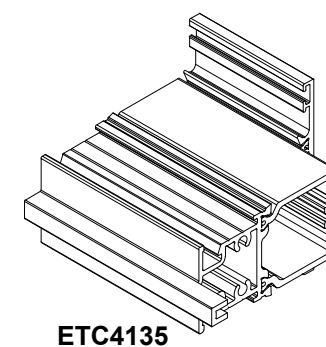
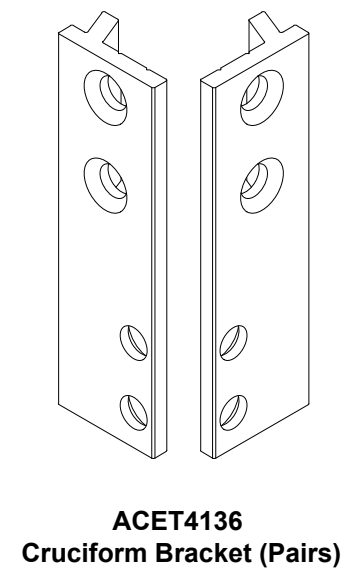
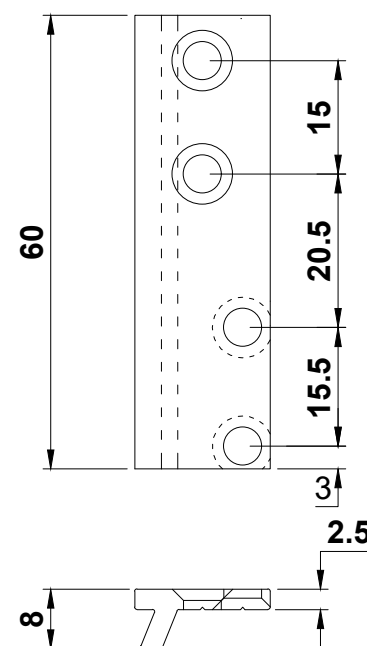
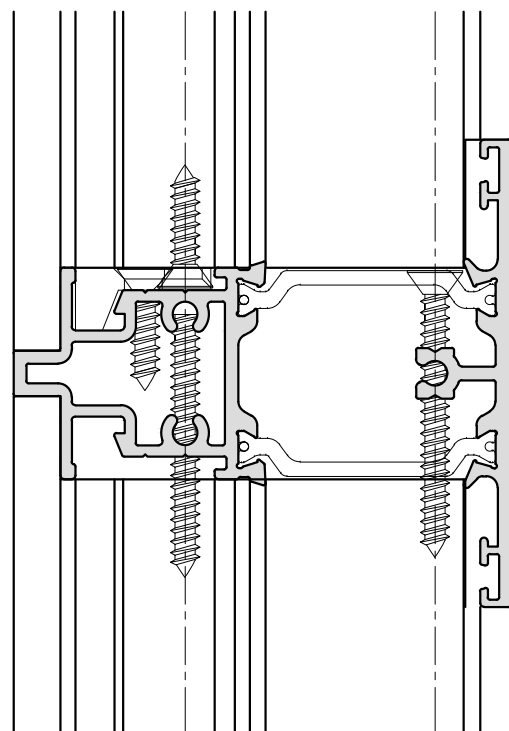
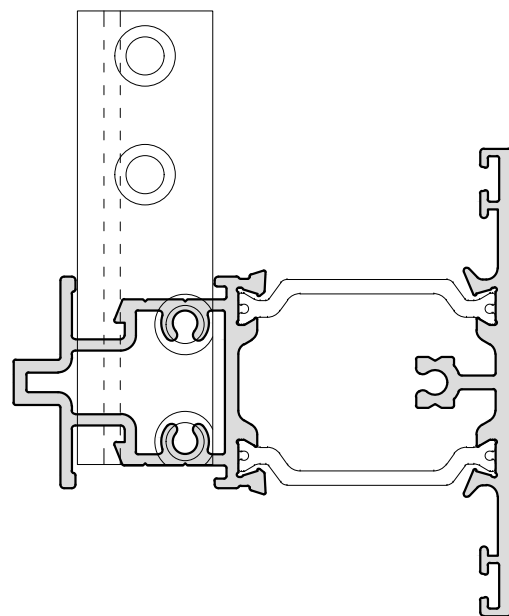
Do Not Scale From This Drawing

ETC4135 Mullion/Transom Detail

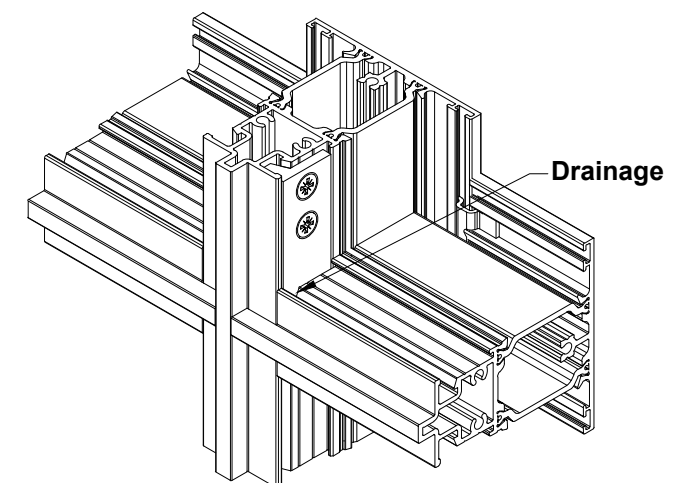
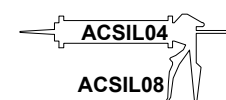


Do Not Scale From This Drawing

ETC4135 Mullion/Transom Detail

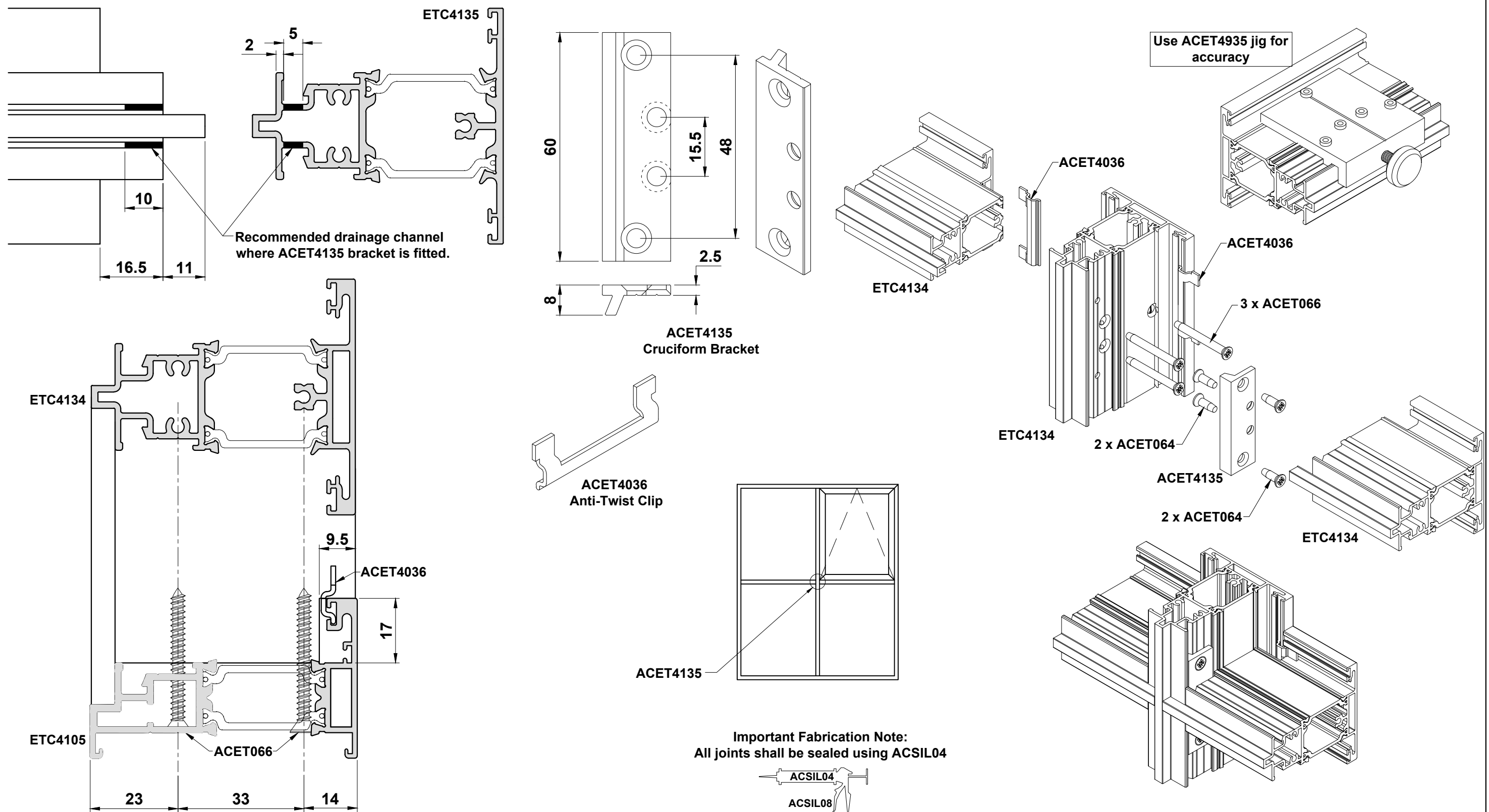


Important Fabrication Note:
All joints shall be sealed using ACSIL04



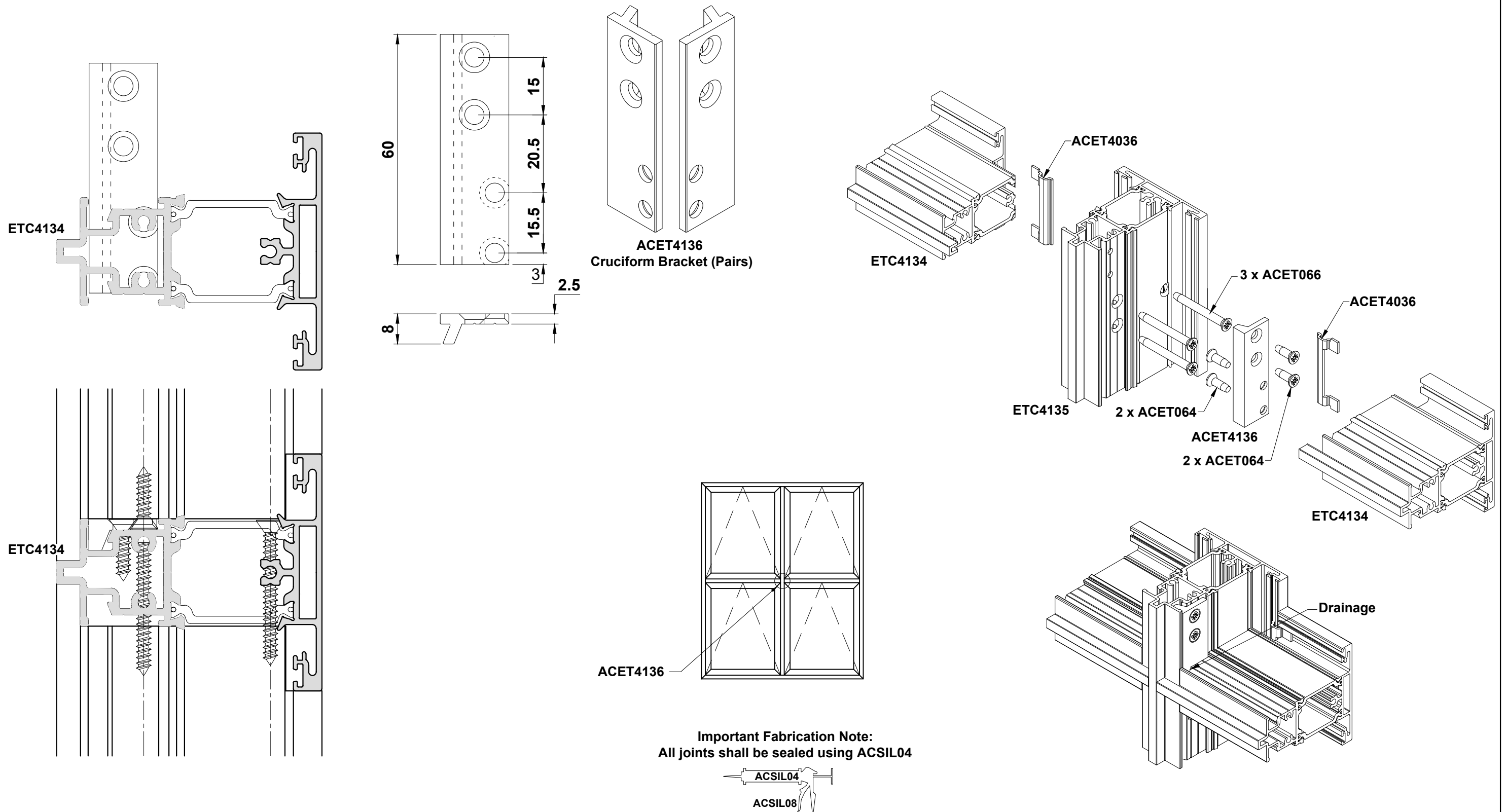
Do Not Scale From This Drawing

ETC4134 Mullion/Transom Detail



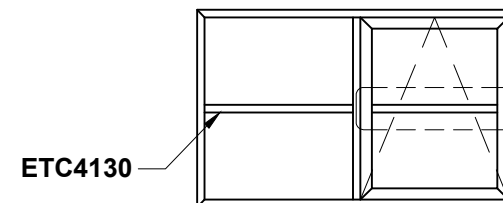
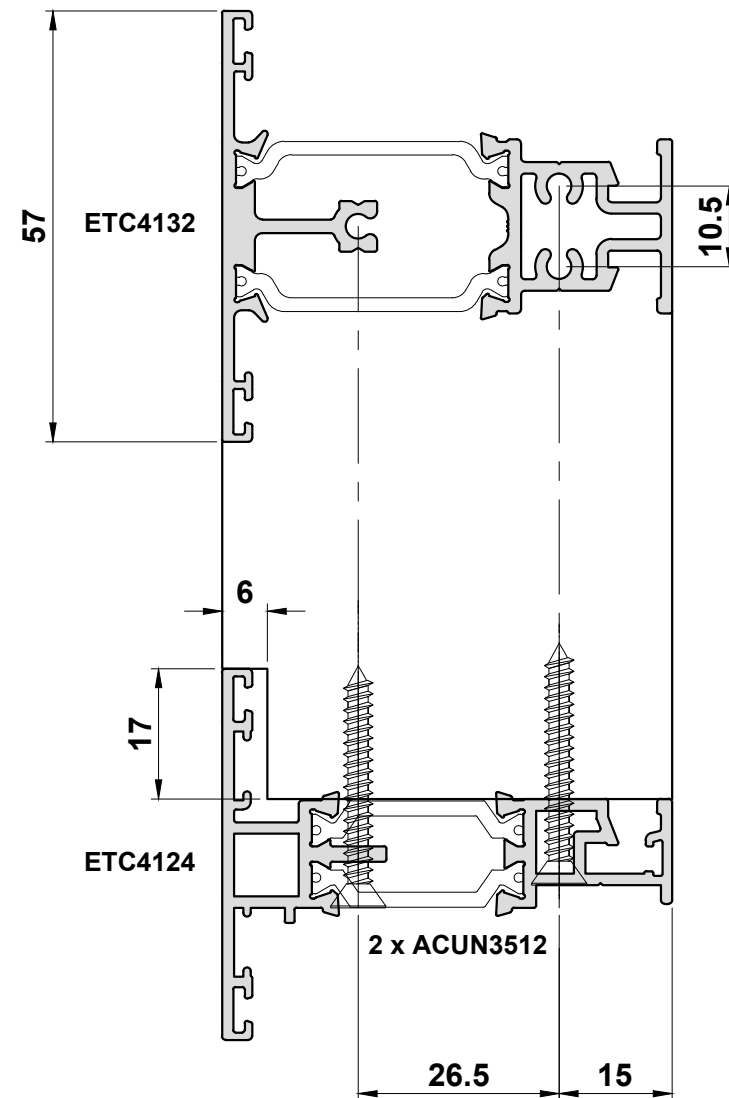
Do Not Scale From This Drawing

ETC4134 Mullion/Transom Detail



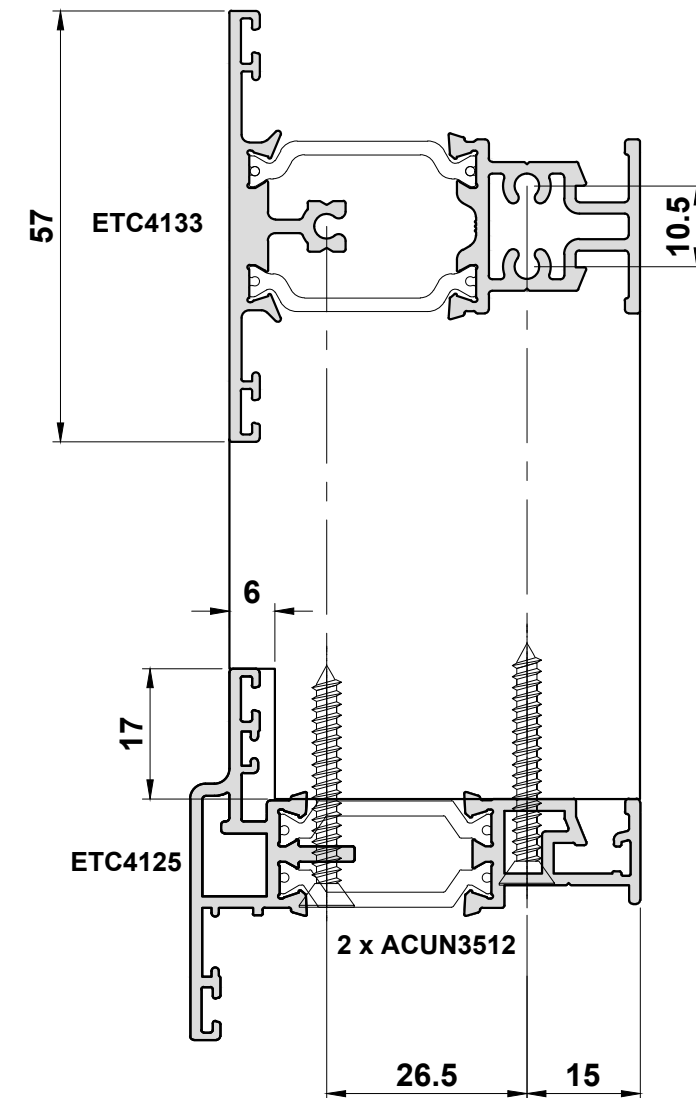
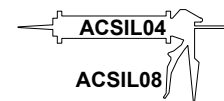
Do Not Scale From This Drawing

ETC4132 & ETC4133 Dummy Transoms

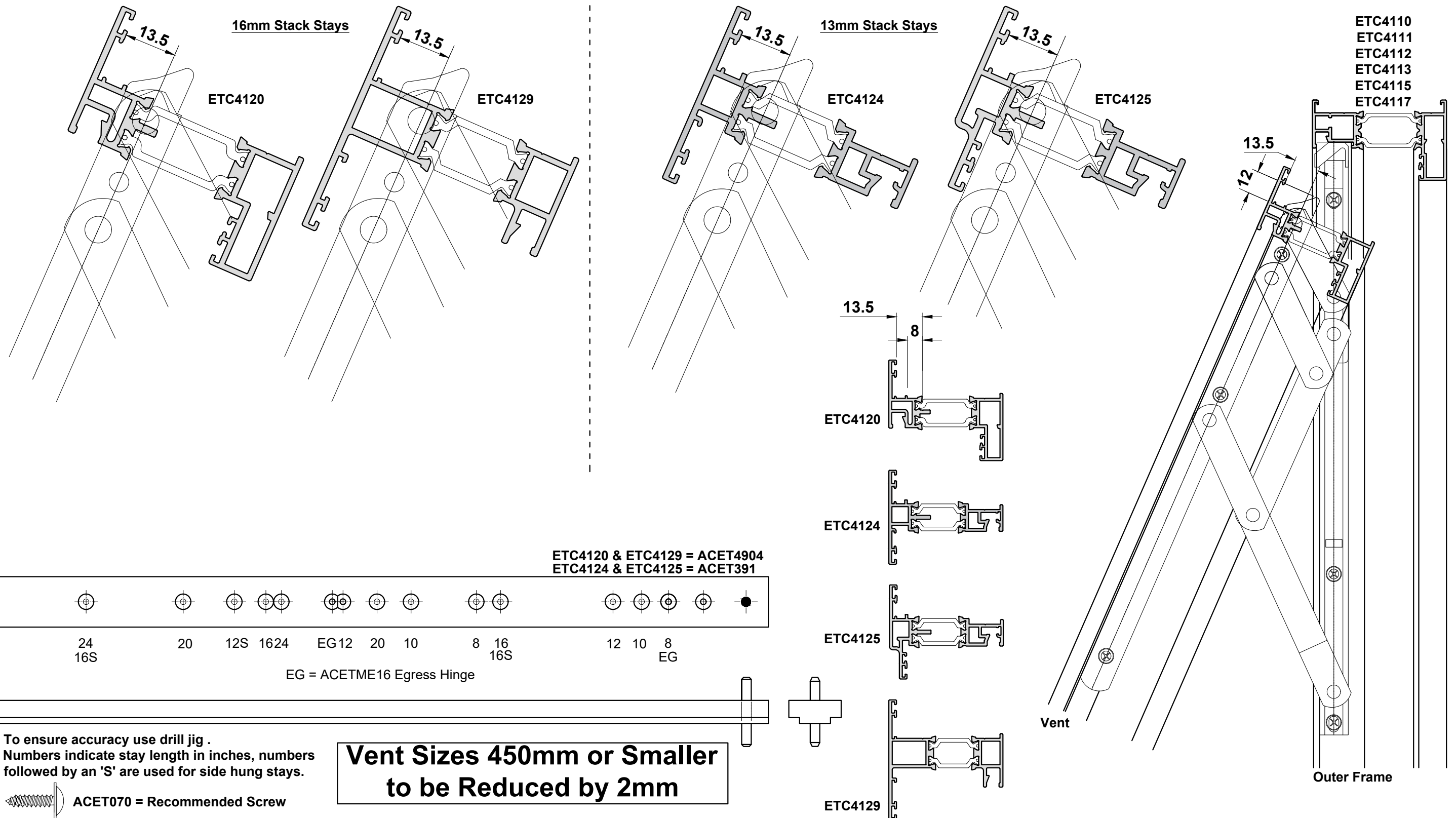


Note:
End mill cutters can be ordered through Smart Systems Ltd.
Please contact the Technical Department for an order form.
Standard delivery is 2-3 weeks approx.

Important Fabrication Note:
All joints shall be sealed using ACSIL04



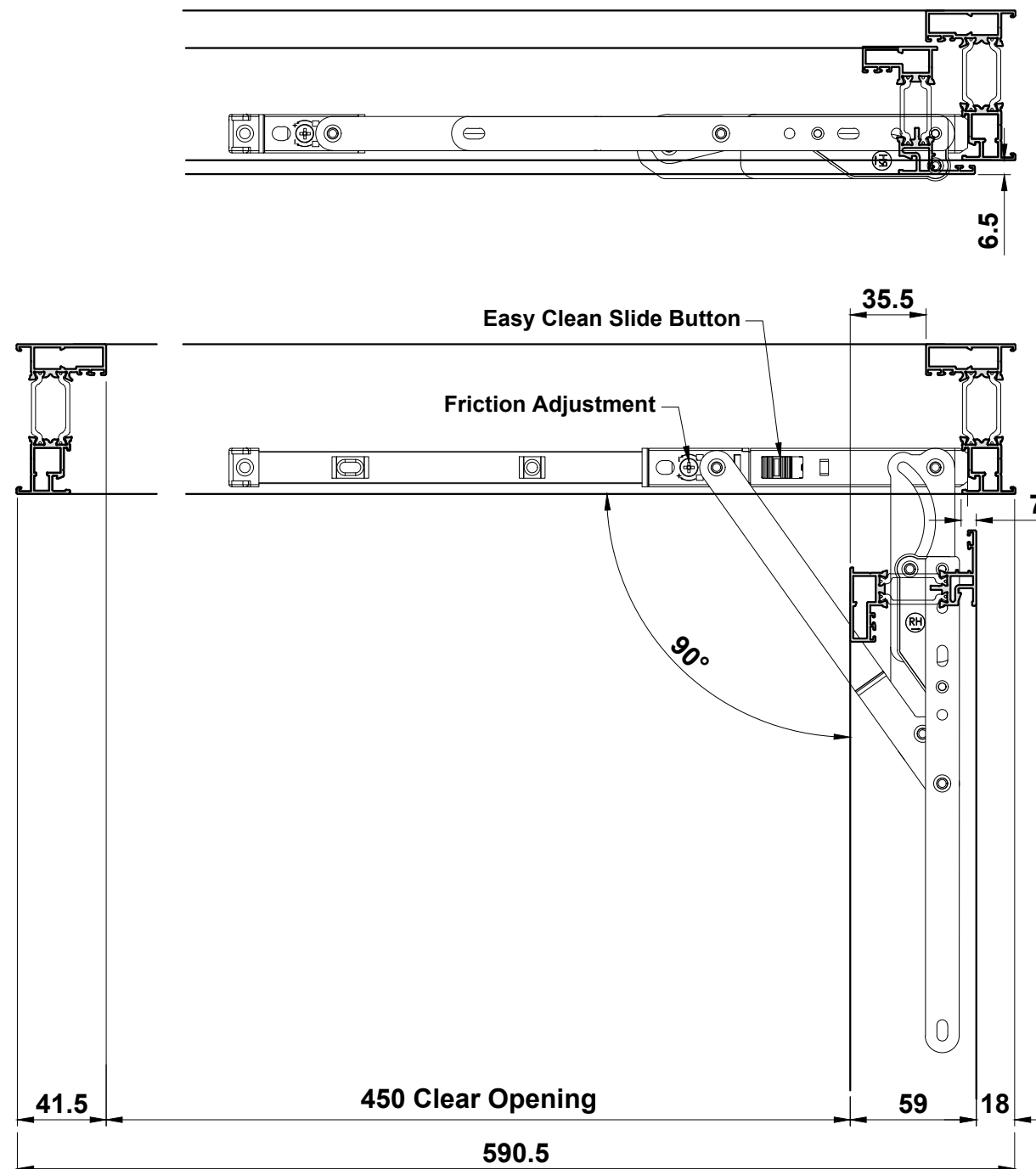
Friction Stay Details



Do Not Scale From This Drawing

Egress Hinge Details

Example Opening Detail

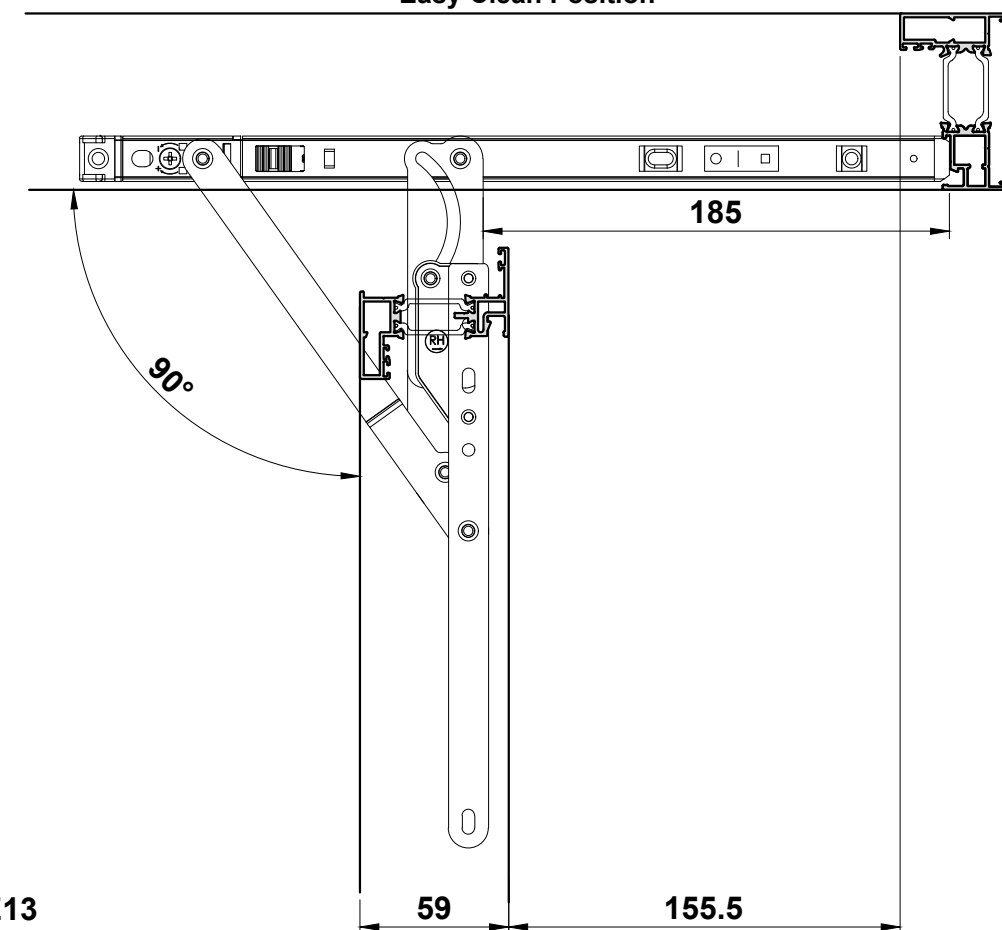


For further information regarding clear openings, please see
the Smart Systems' White Paper Document B

The benefits of these hinges are:

- True 90° opening angle
- Achieves minimum fire escape requirement on smaller windows
- Can be moved into easy clean position, with automatic reset on closing
- Superior carrying weight (40kg max)
- The 345mm length replaces the current 305mm & 406mm hinges
- Tested to BS EN1670 and exceeded Grade 5 for ultimate corrosion resistance
- Tested to EN1191 over 25,000 cycles under 40kg.

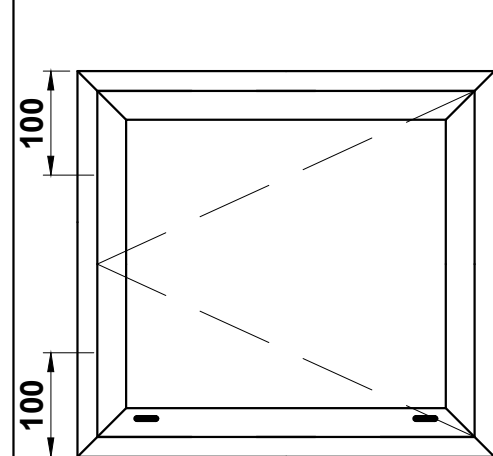
Easy Clean Position



ACETME16 & ACETME13 Egress Hinges

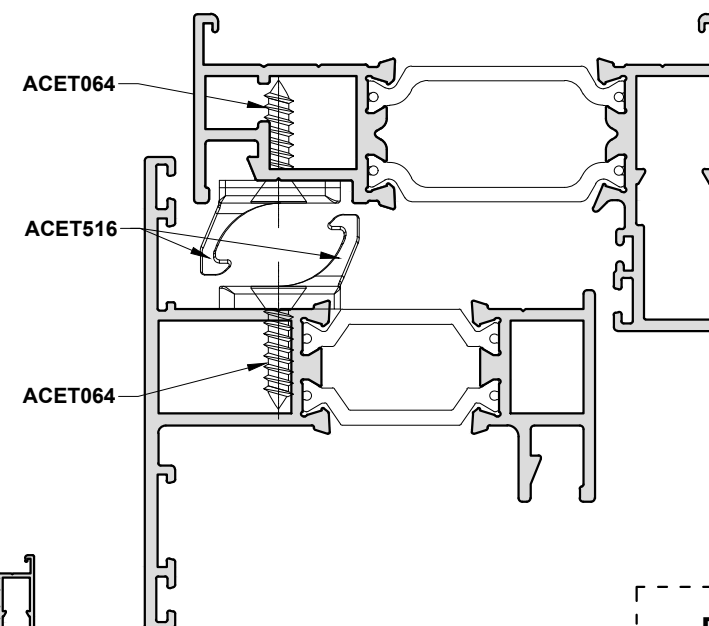
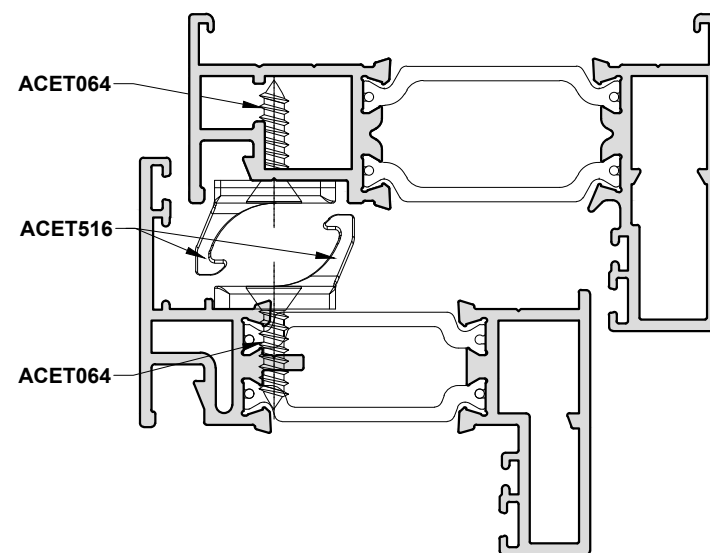
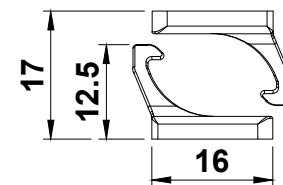
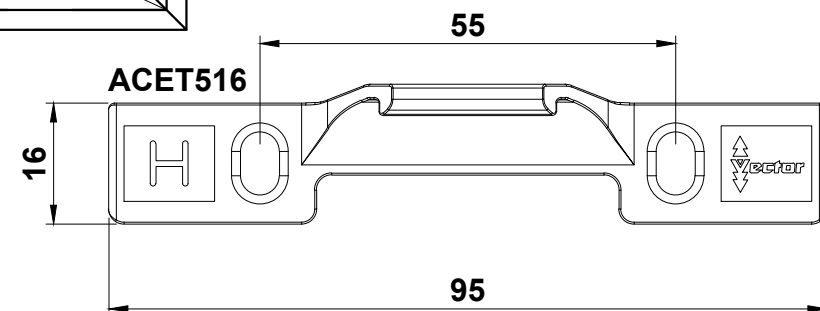
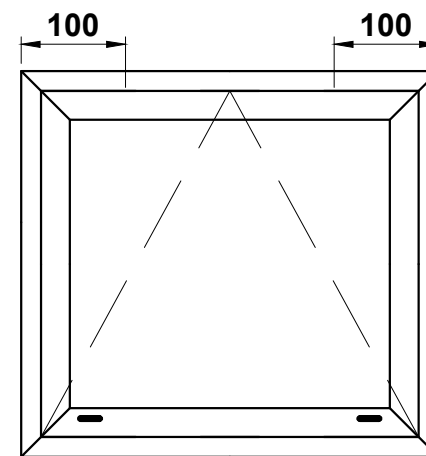
Side Hung	Sashes	Jig	Max. Vent	Width		Typical Height
			Weight (kgs)	Minimum	Maximum	
ACETME13	ETC4124 & ETC4125	ACETME93	40	365	865	-
ACETME16	ETC4120 & ETC4129	ACETME96				

Security Hinge Protectors & Pull-In Blocks

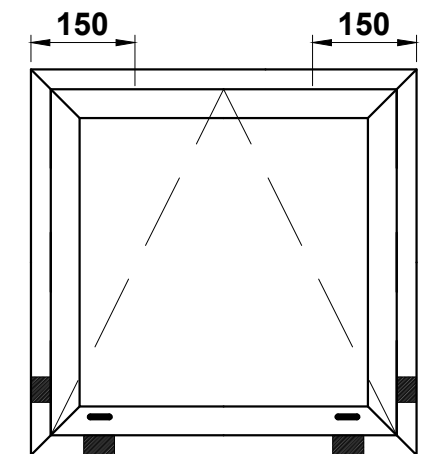
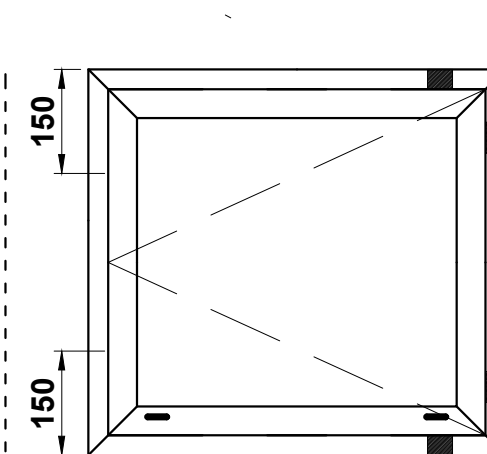
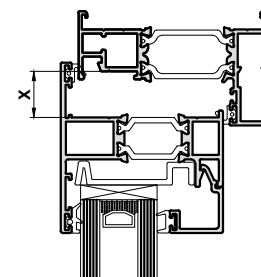


Please Note:

- 2 pairs per opening vent to be fitted to hinged side of window
- Each pair must be fitted with the hook centre within 100mm of each hinge



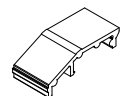
Pull In Block		
Sash	Pull In Block	'X'
ETC4120	ACET652	17
ETC4124	ACET352	14.5
ETC4129	ACET652	17



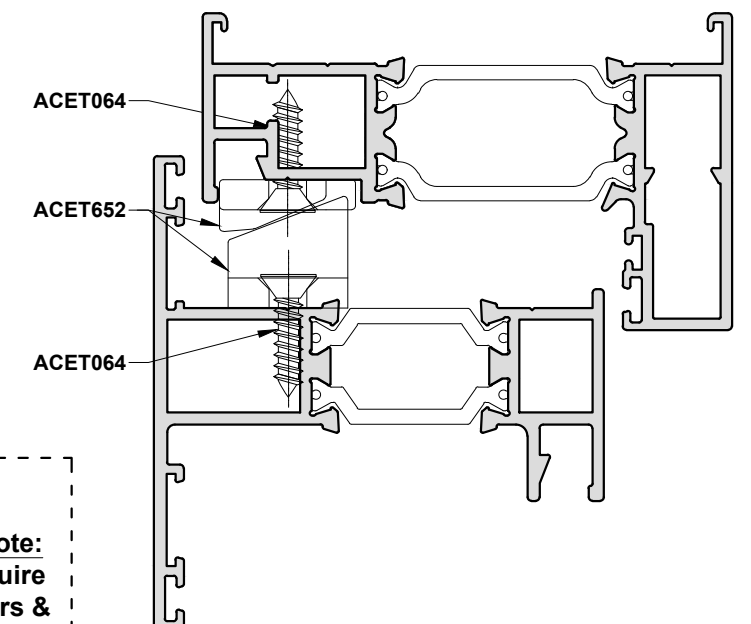
Please Note:

- 2 pairs per opening vent to be fitted to hinged side of window
- Each pair must be fitted with the wedge centre within 150mm of each hinge and in the centre of the window when sash height or width is greater than 800mm.
- When used with ACET516 and security takes priority, install ACET652 centre within 200mm of hinge.

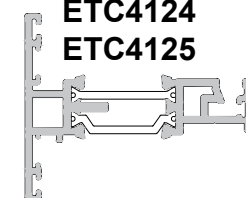
■ ACET4180



Please note that for fitting each sash, we recommend using 4 x ACET4180, as shown in the images above.



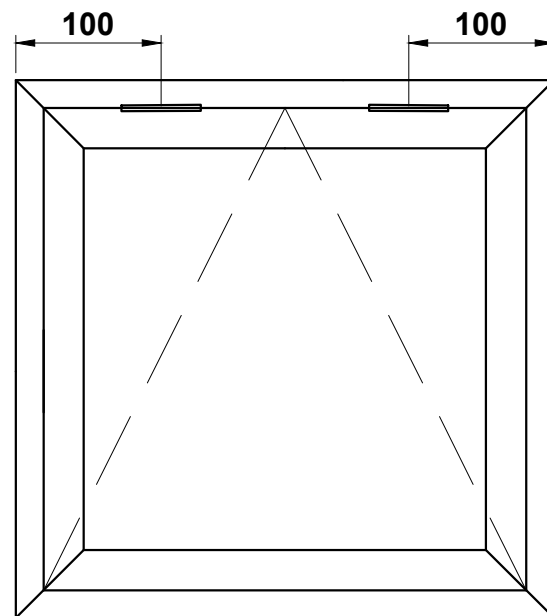
**ETC4124
ETC4125**



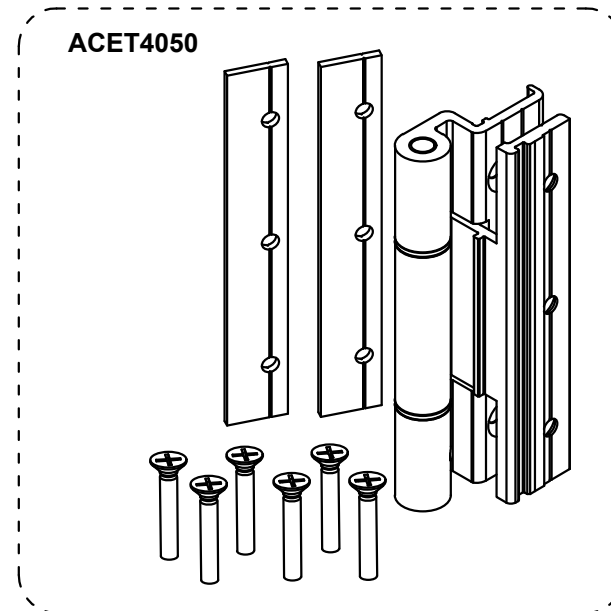
Important Fabrication Note:
ETC4124 & ETC4125 require ACET513 Hinge Protectors & ACET352 Pull-In Blocks.

Do Not Scale From This Drawing

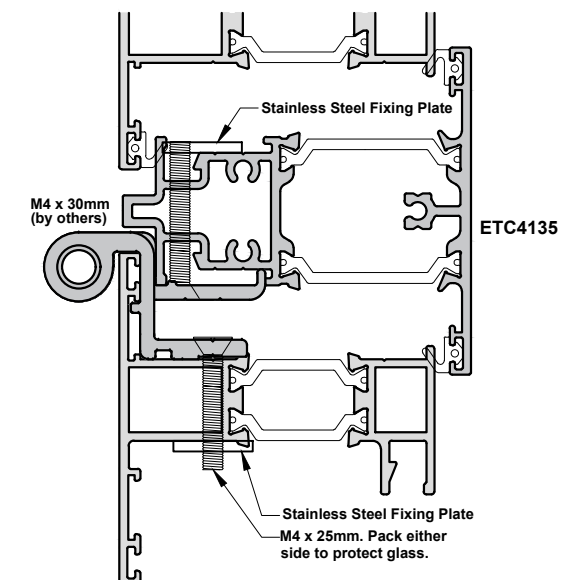
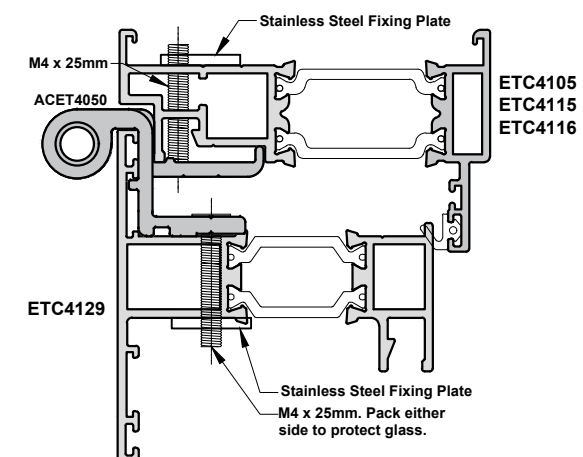
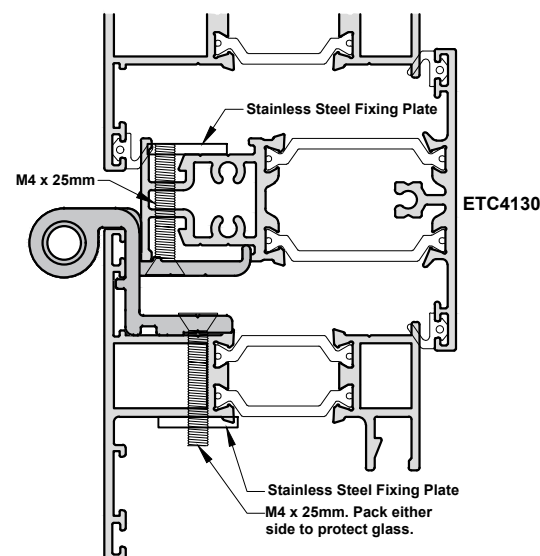
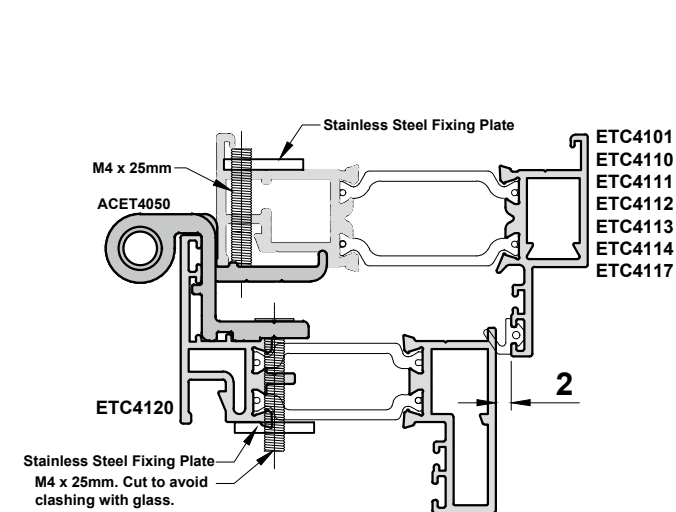
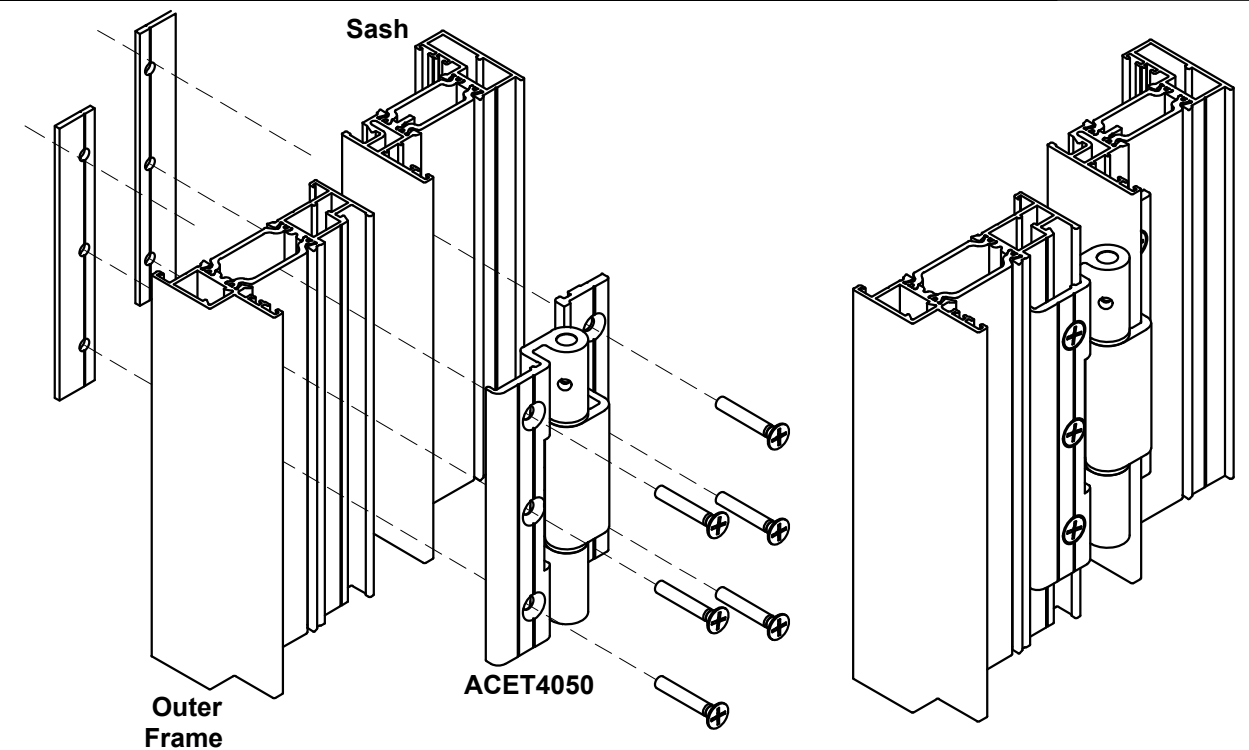
ACET4050 Hinge Details



Please note: ACET4050 Butt Hinge is not covered by the Kitemark.

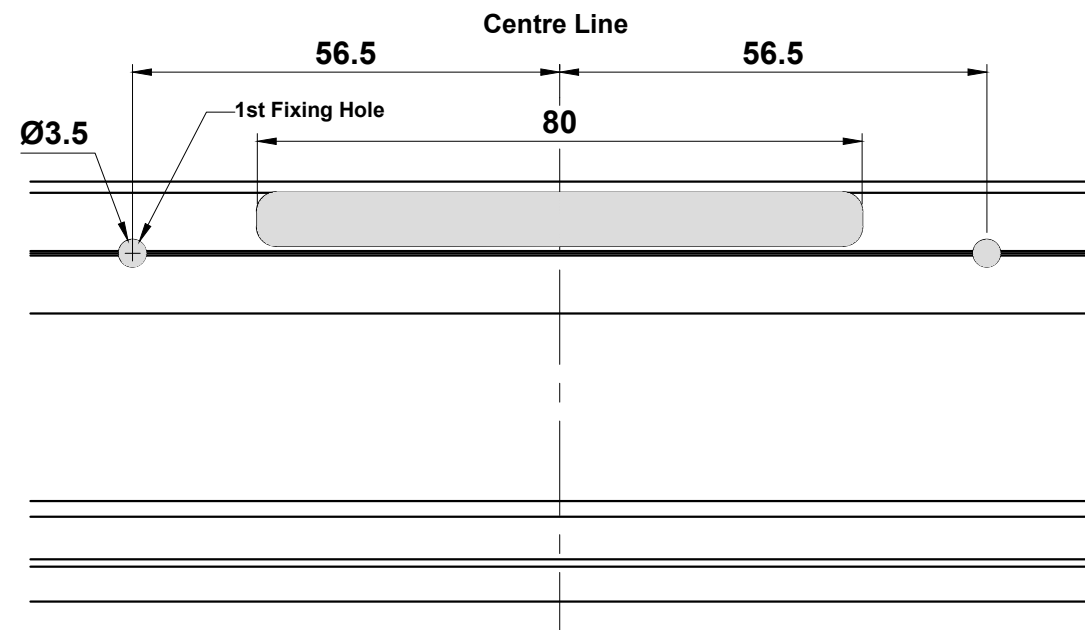


**Top Hung Max. 50kg
Side Hung Max. 40kg**

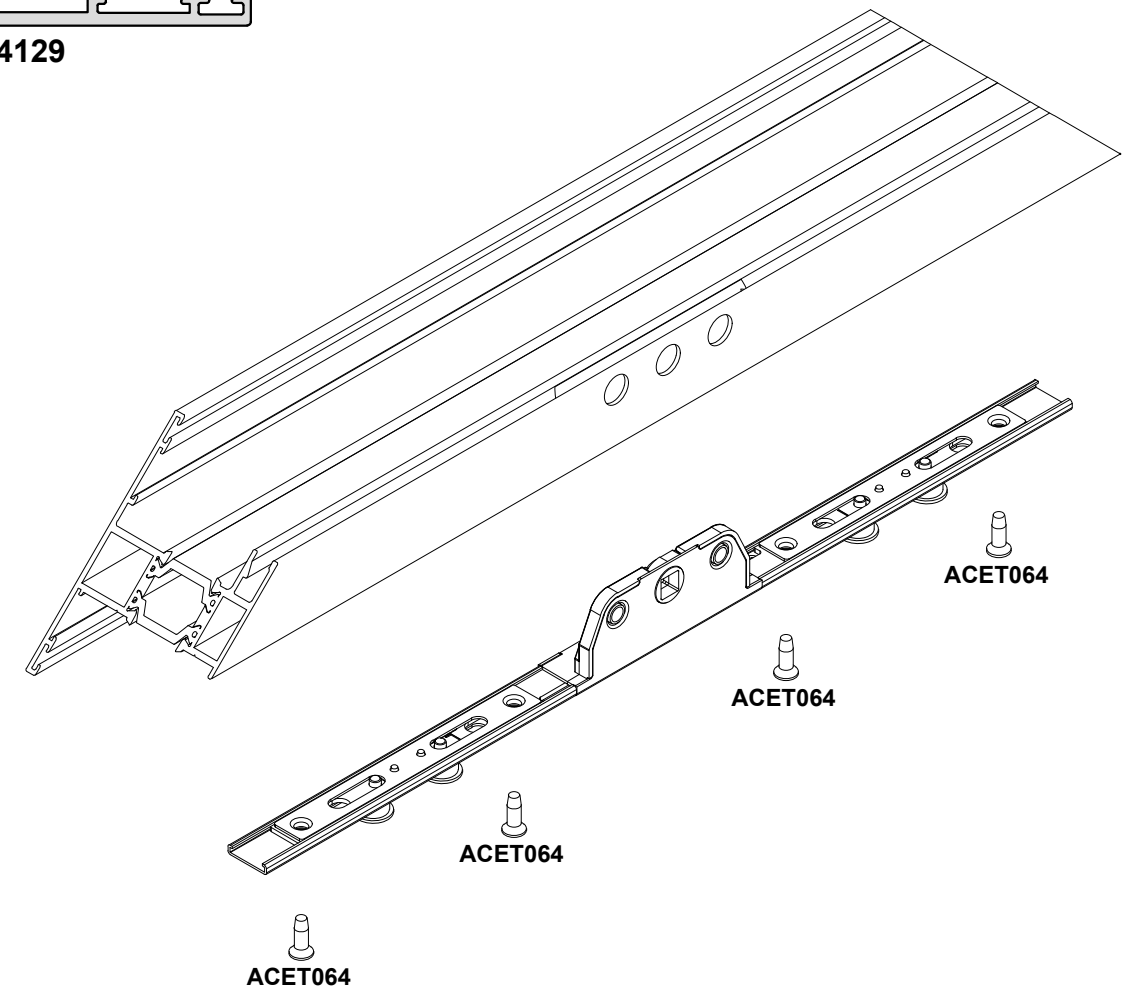
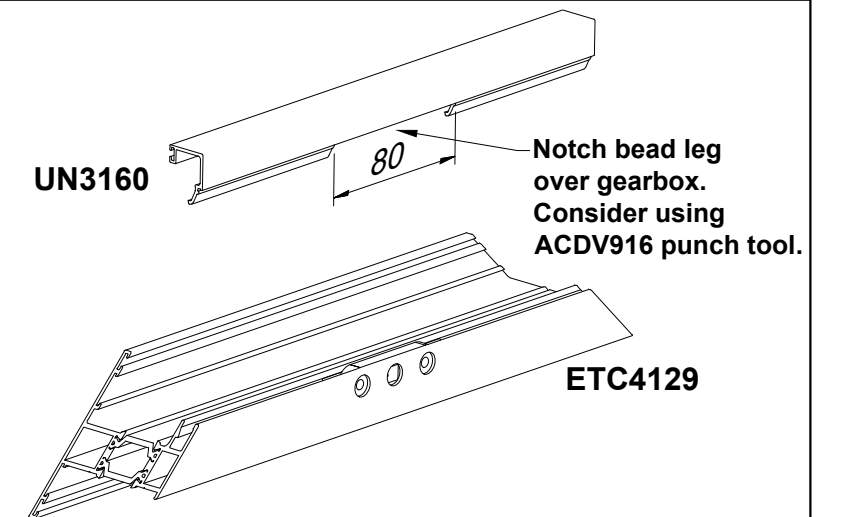
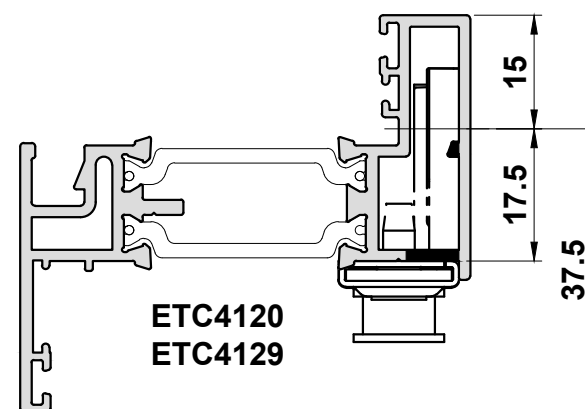
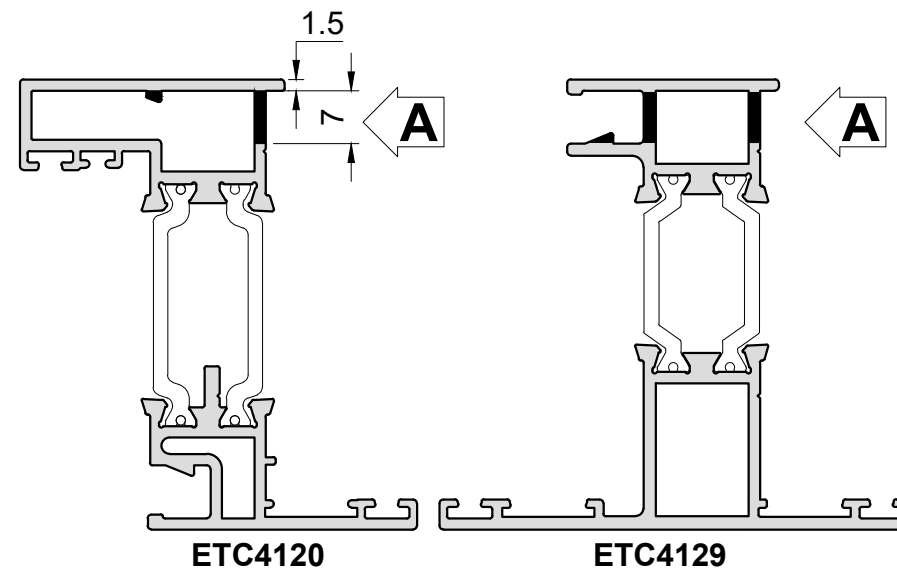
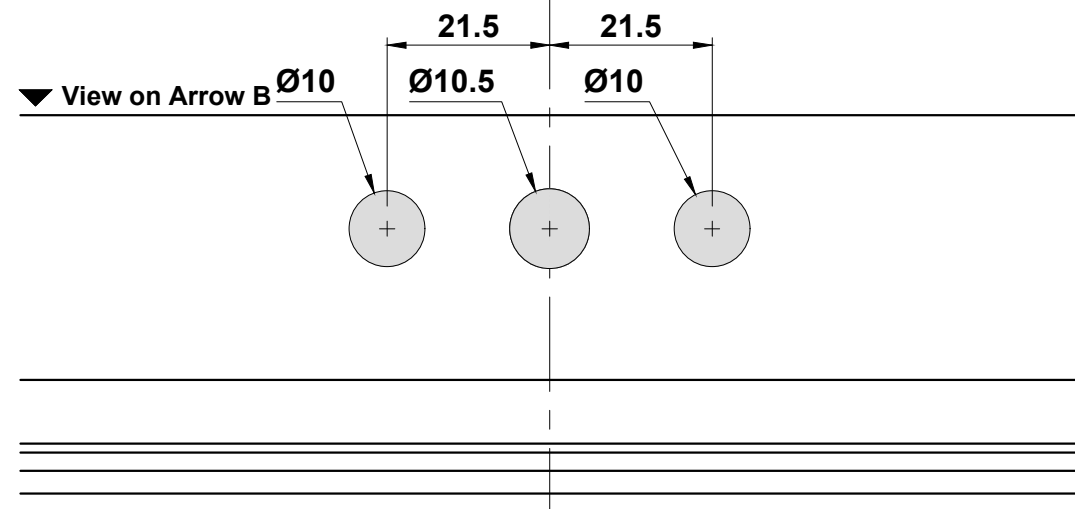


Important note:
ACET4050 Butt Hinge is not compatible with ETC4124 & ETC4125

Espag Locking Prep Detail

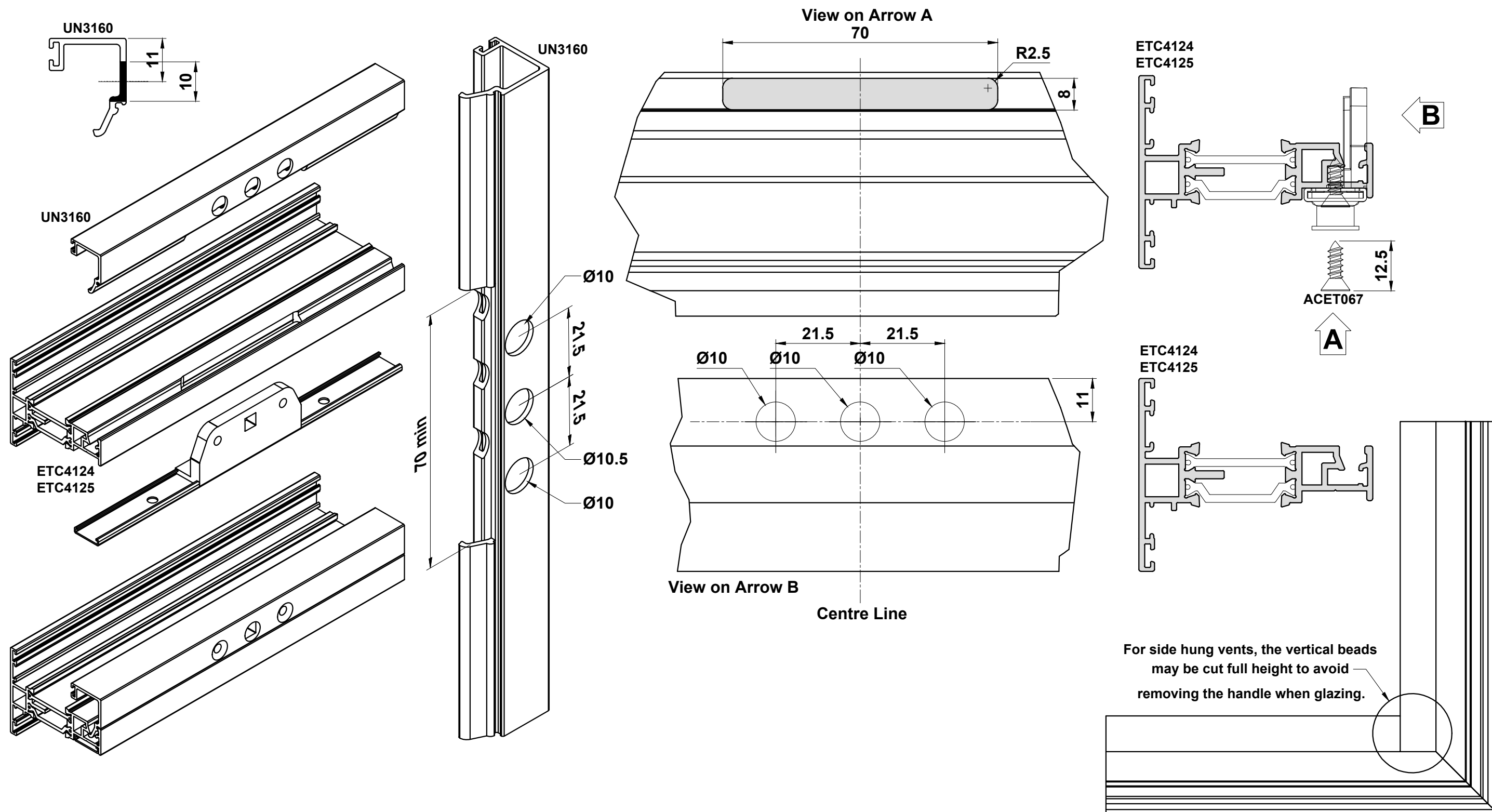


▲ View on Arrow A

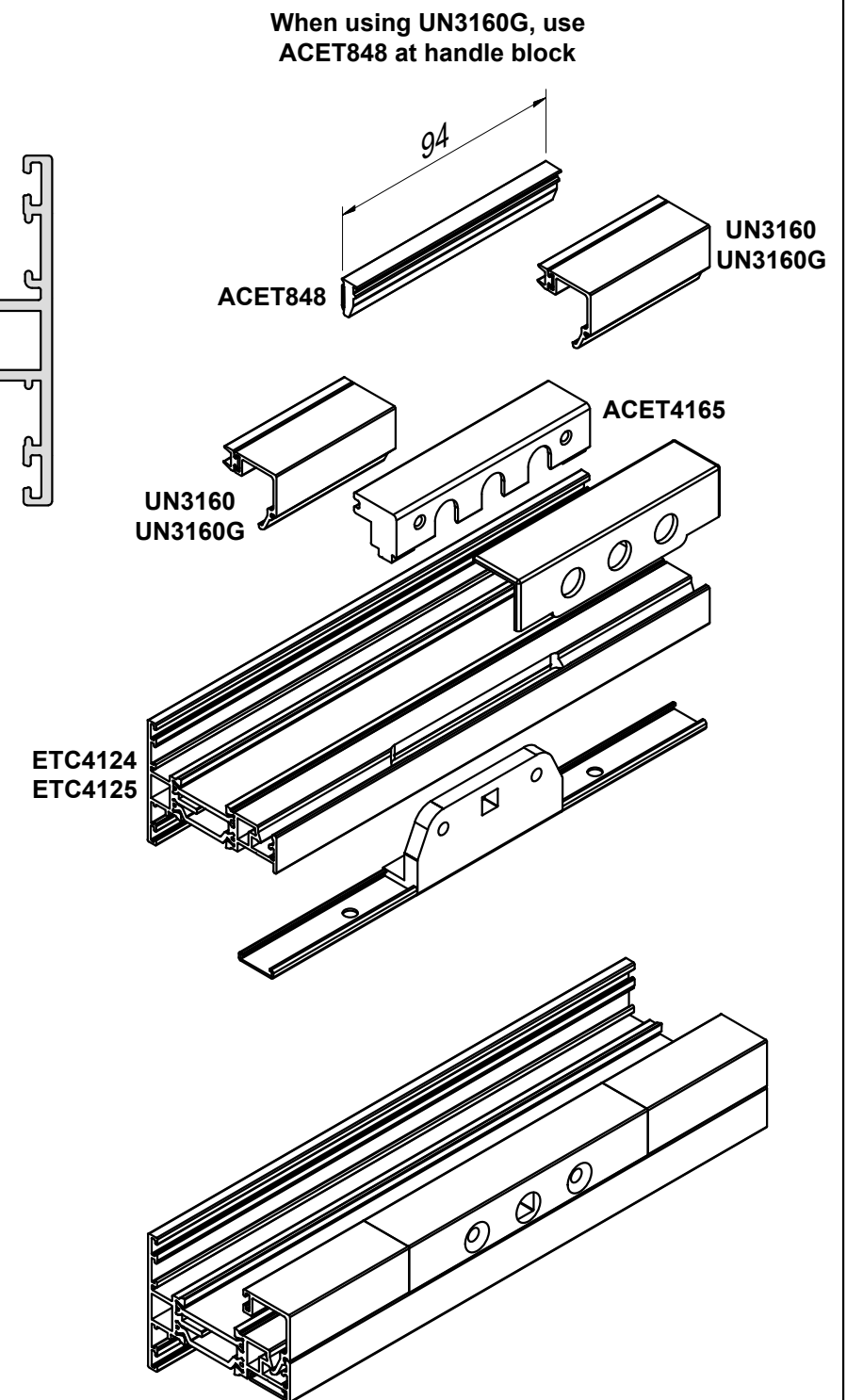
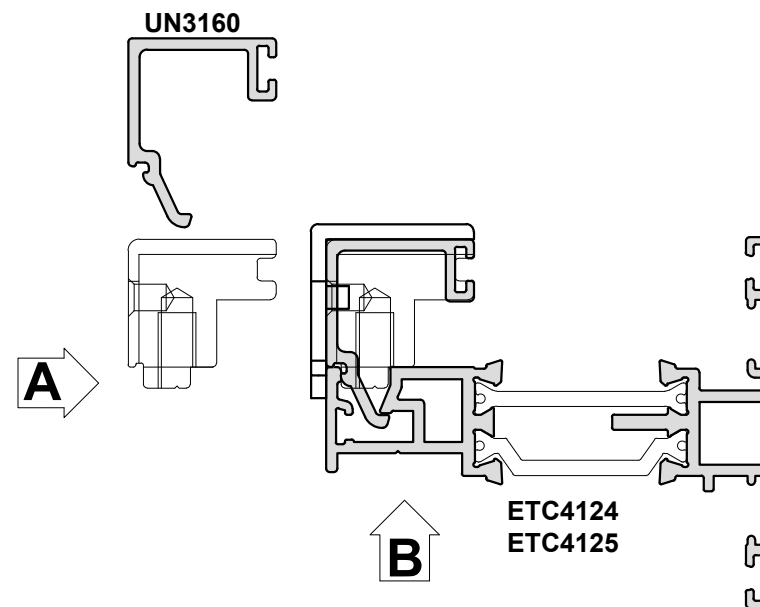
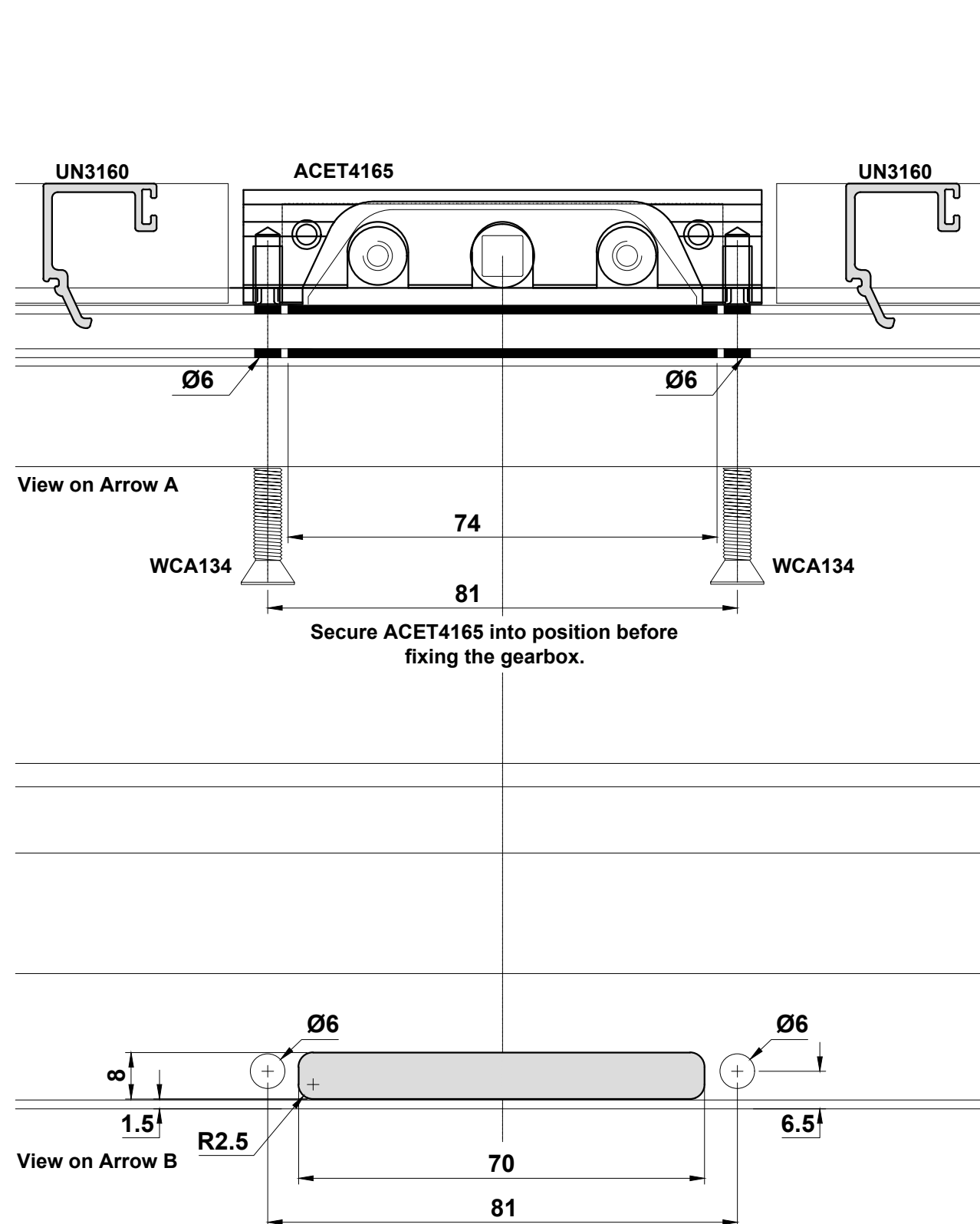


Do Not Scale From This Drawing

Lock & Handle Machining

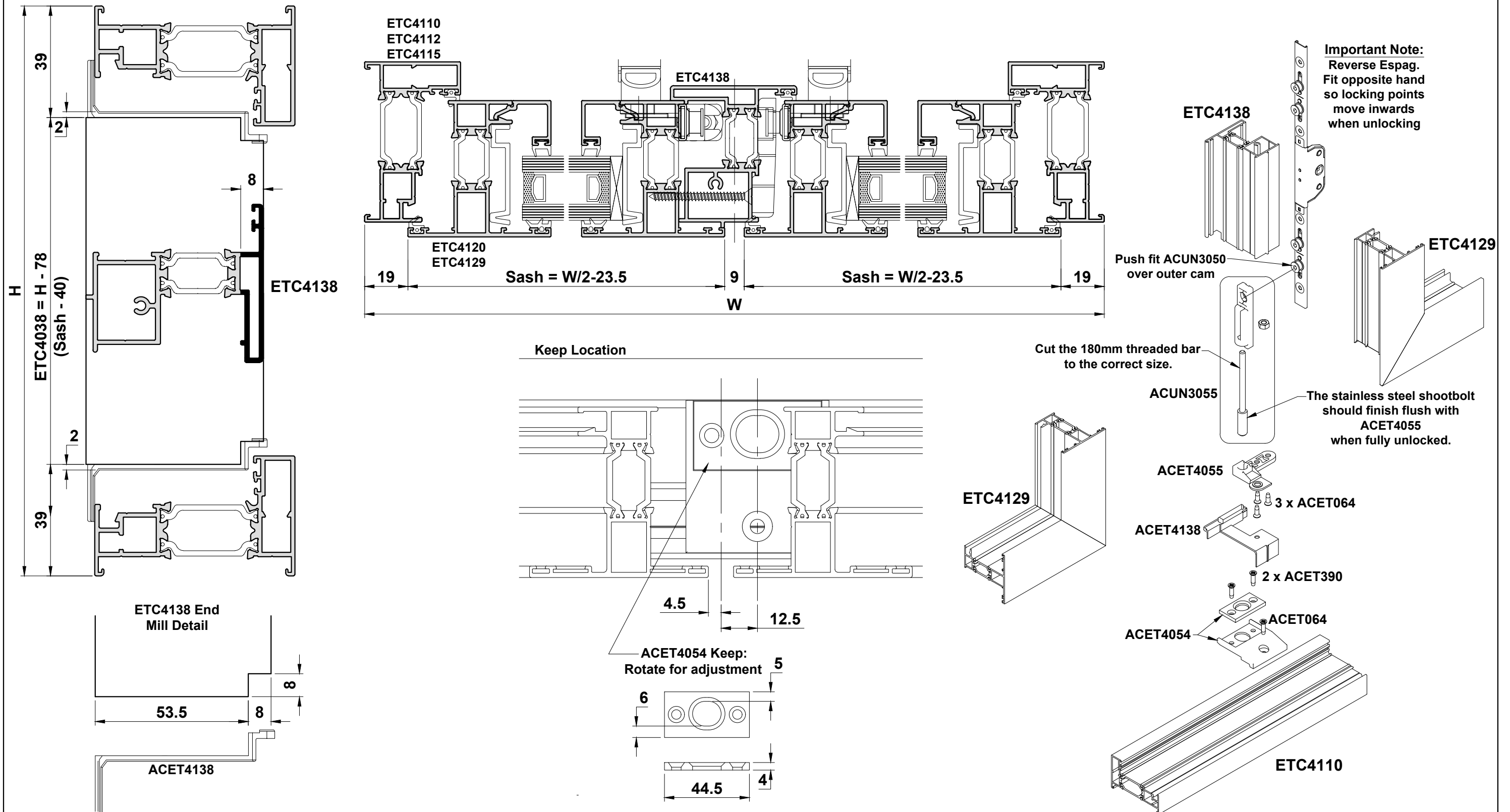


Lock & Handle Machining

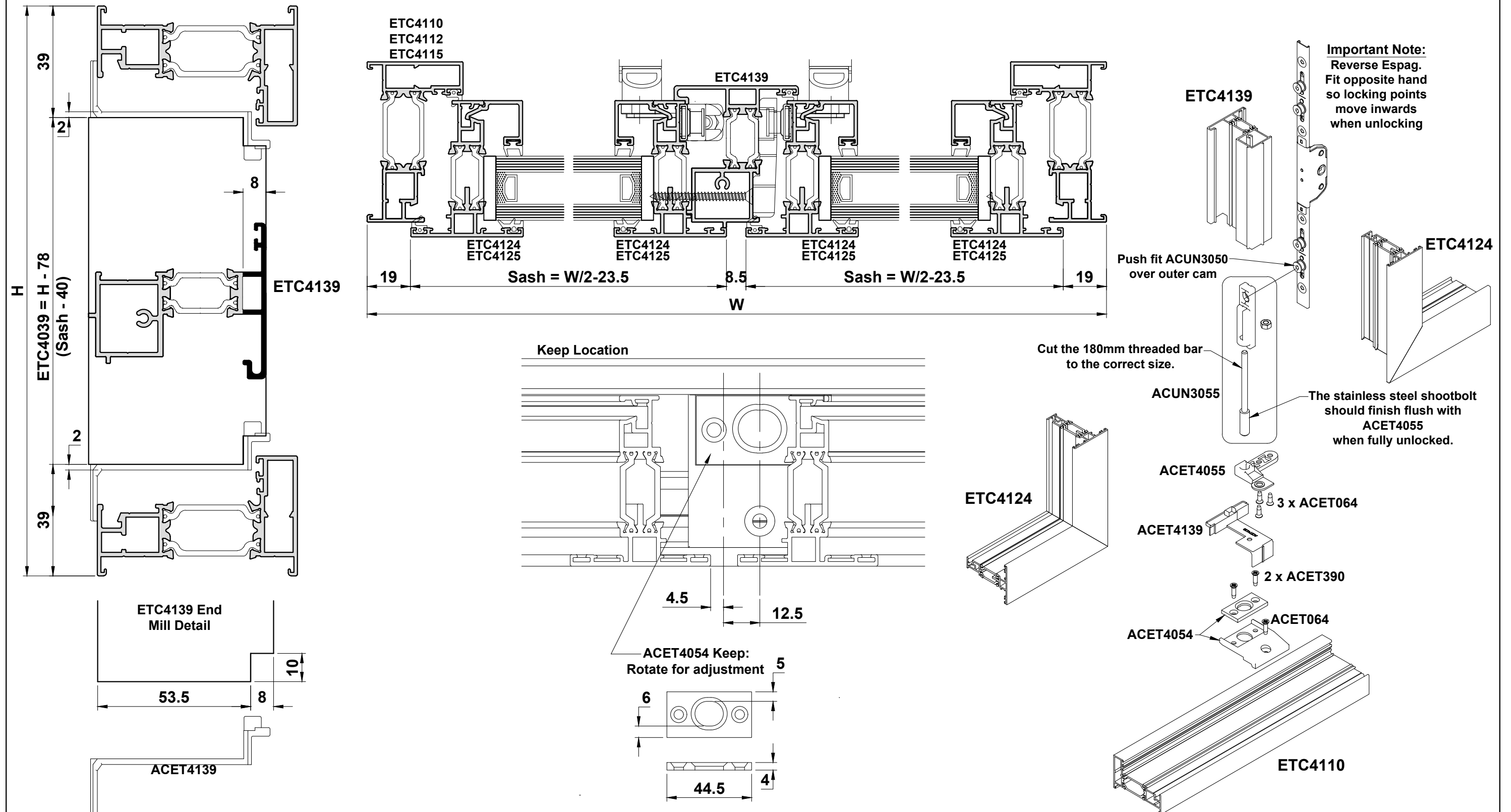


Do Not Scale From This Drawing

French Casement Assembly



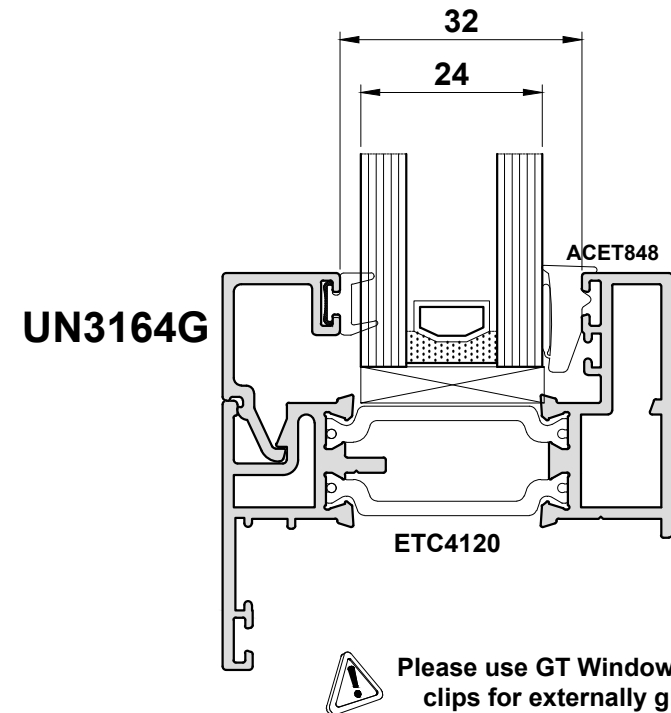
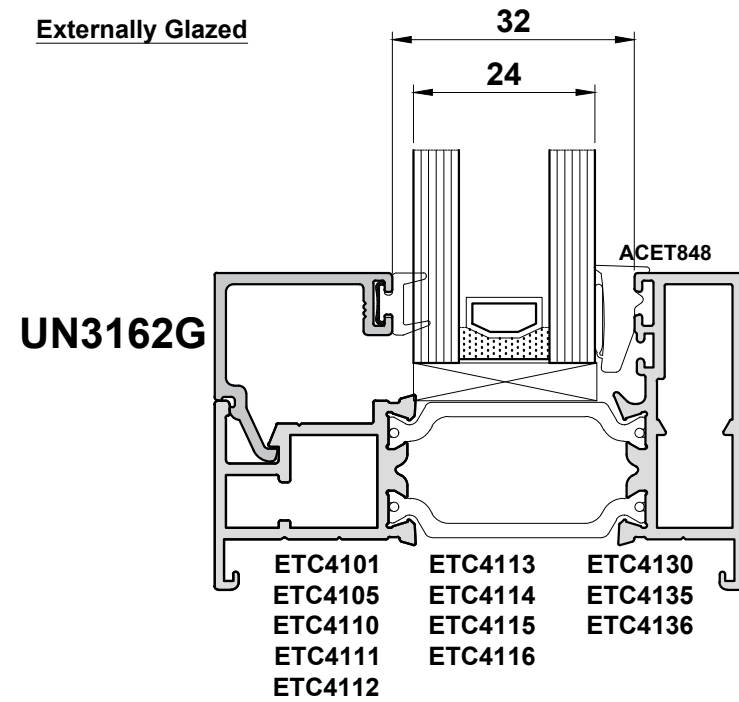
French Casement Assembly



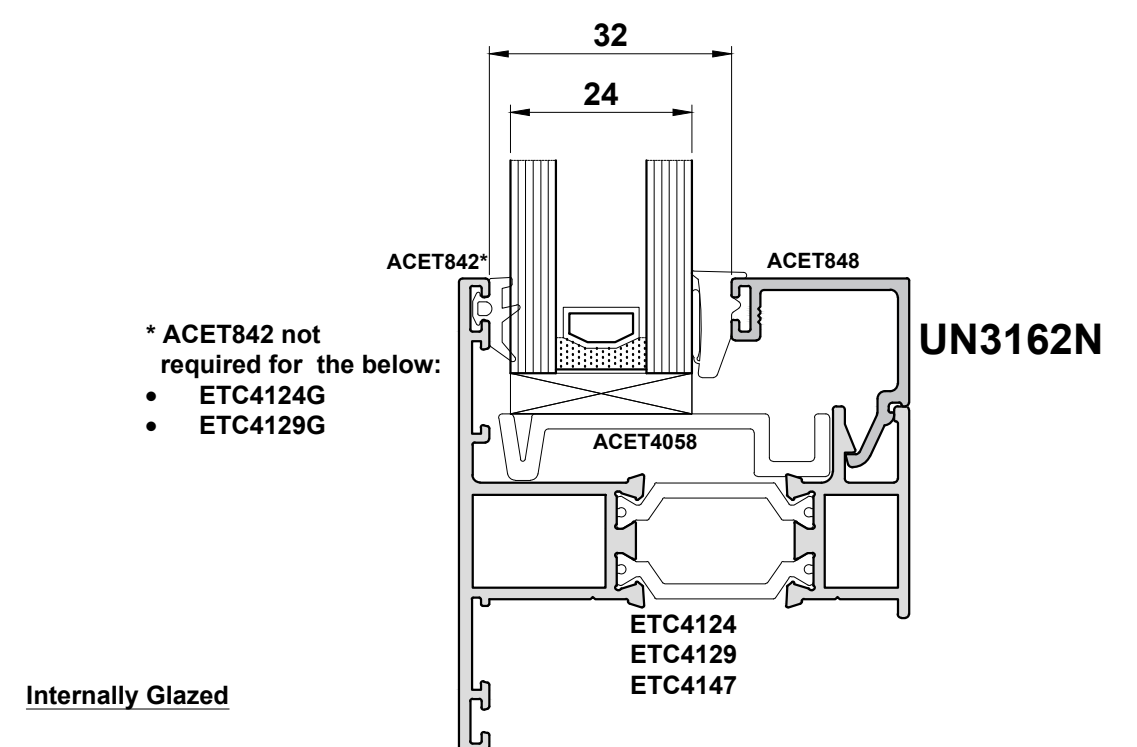
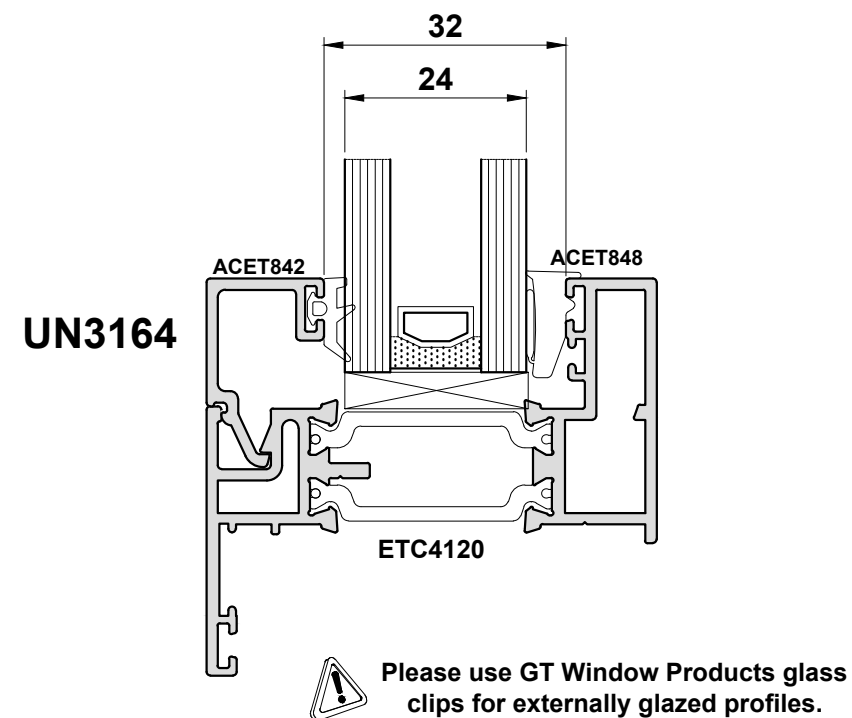
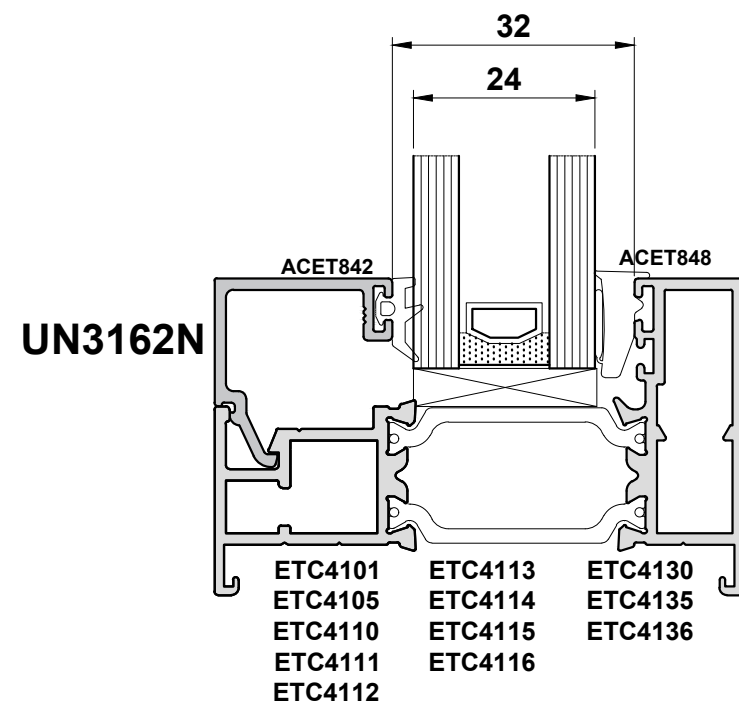
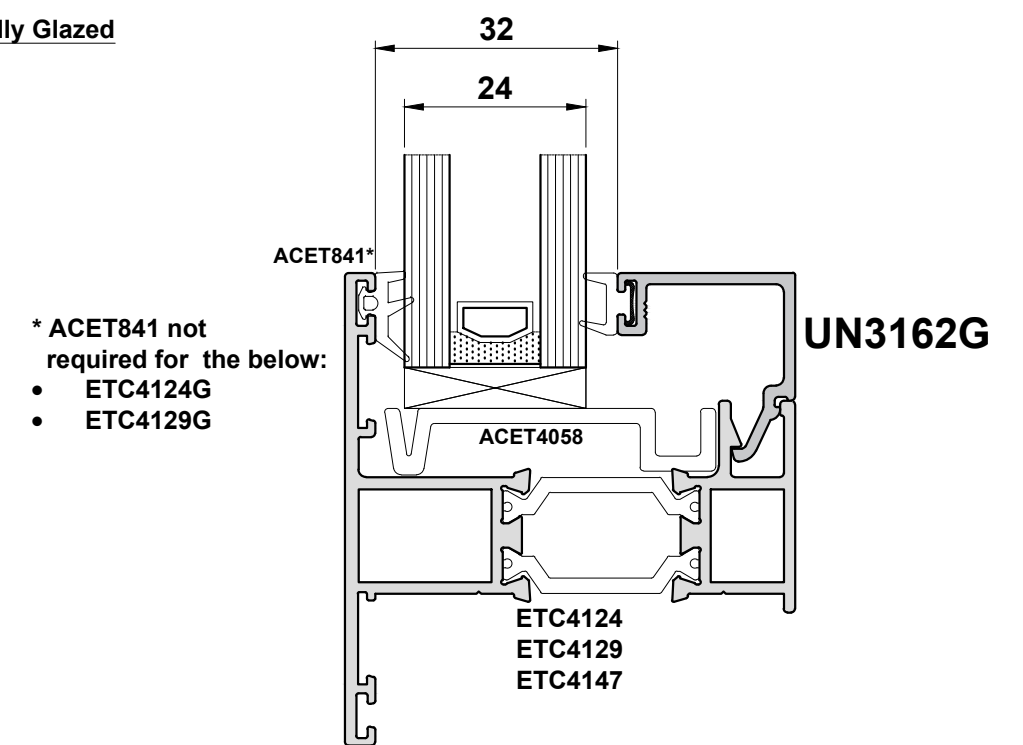
Do Not Scale From This Drawing

Glazing Chart

Externally Glazed



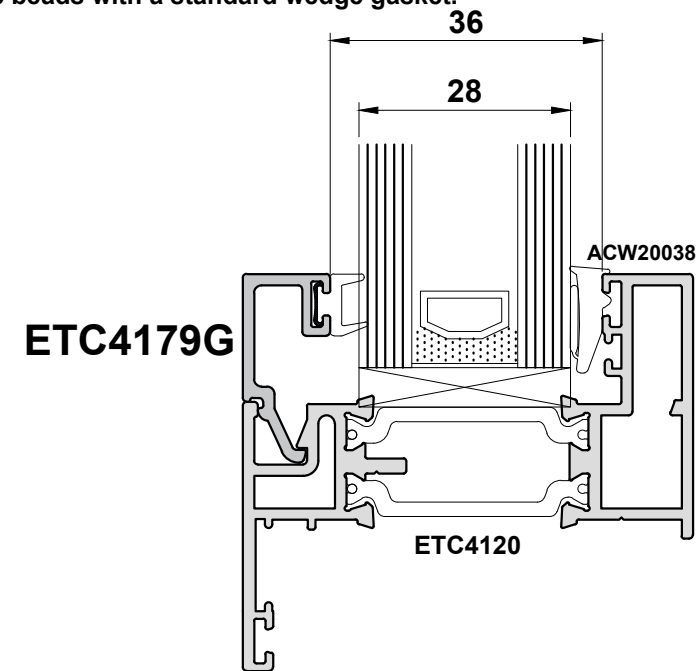
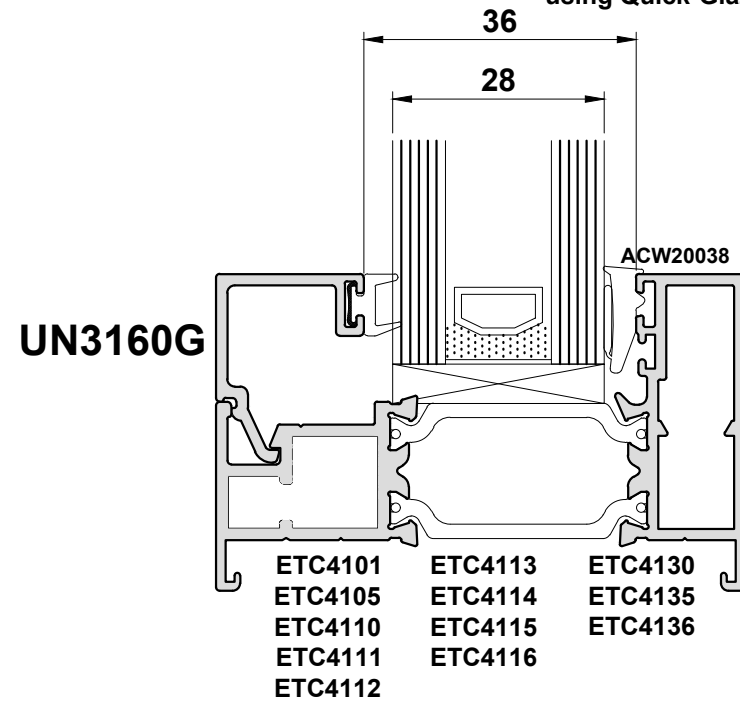
Internally Glazed



Glazing Chart

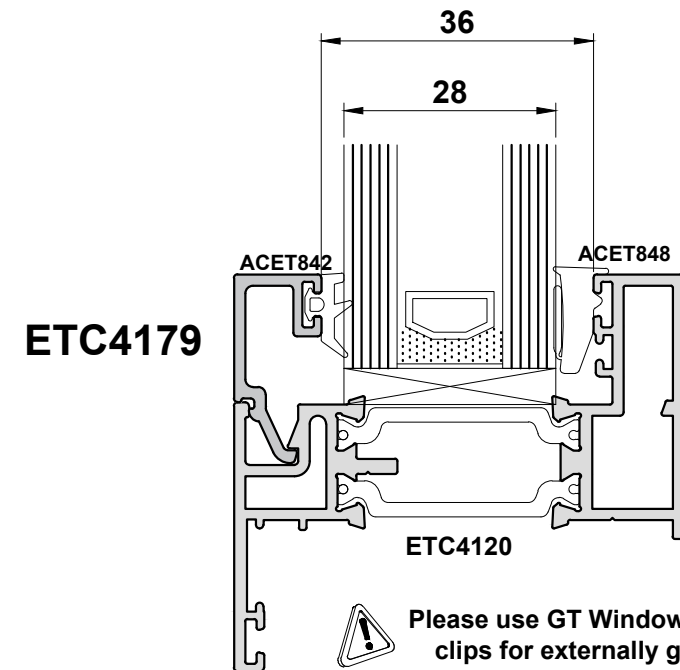
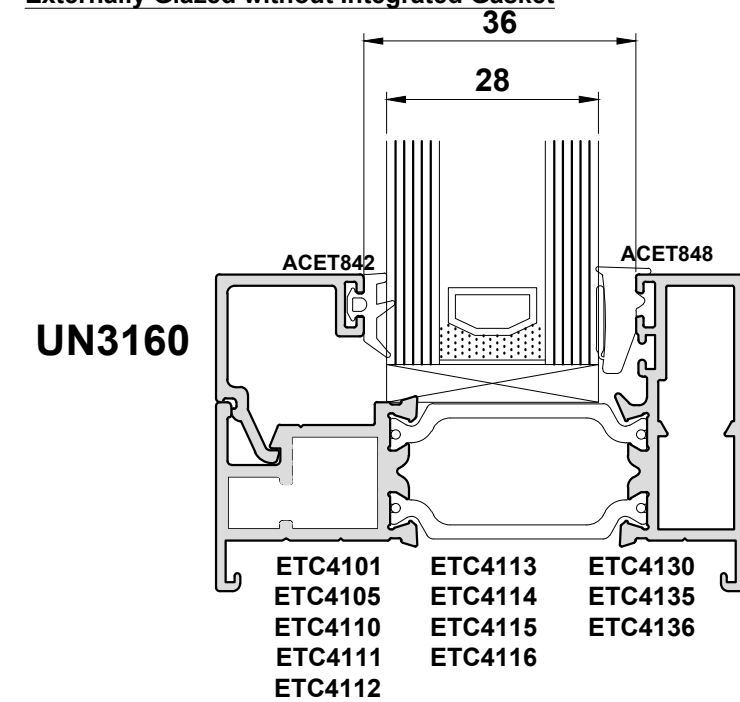
Externally Glazed

Externally glazed Alitherm 400 sections may be glazed using Quick-Glaze beads with a standard wedge gasket.



⚠ Please use GT Window Products glass clips for externally glazed profiles.

Externally Glazed without Integrated Gasket

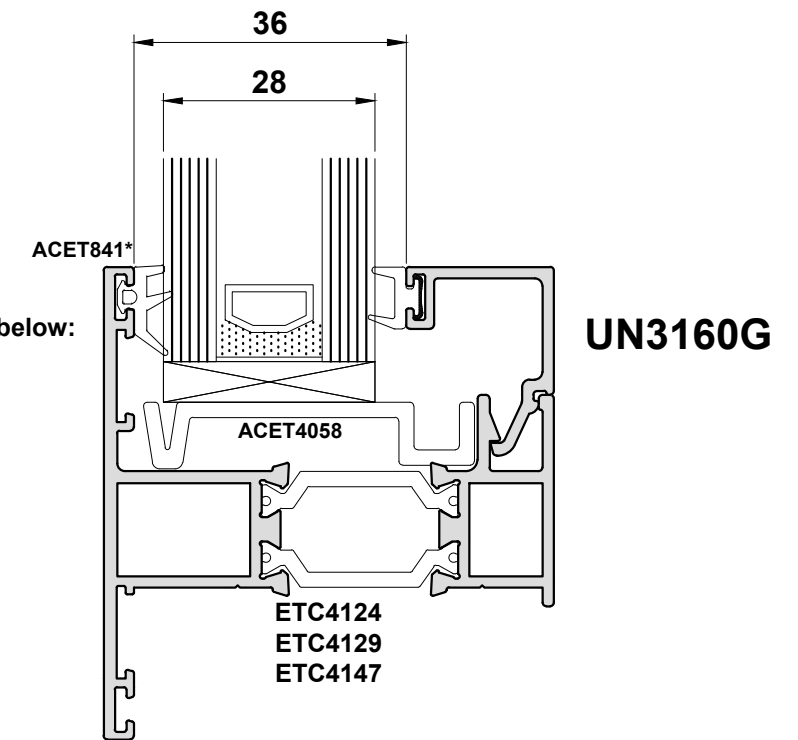


⚠ Please use GT Window Products glass clips for externally glazed profiles.

Internally Glazed

* ACET841 not required for the below:

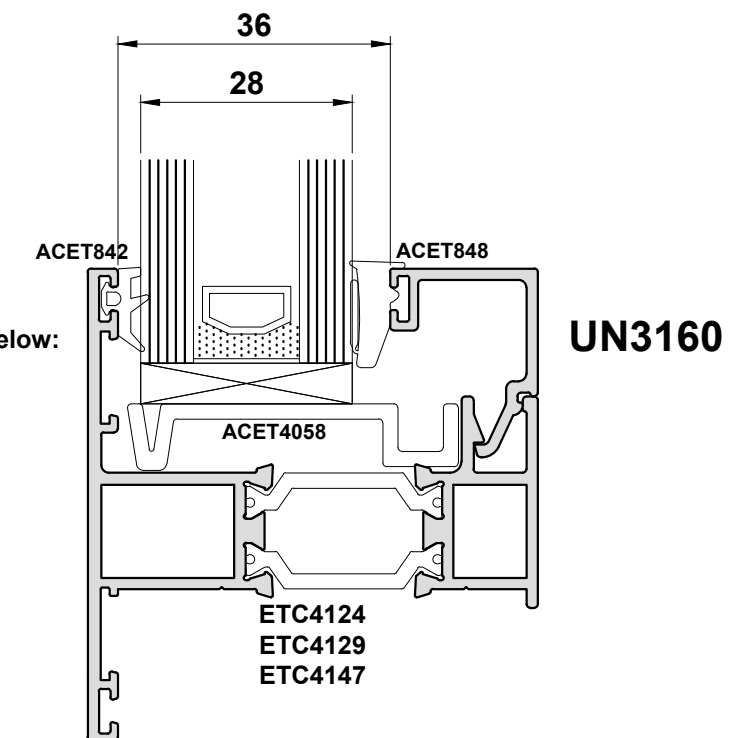
- ETC4124G
- ETC4129G



Internally Glazed

* ACET842 not required for the below:

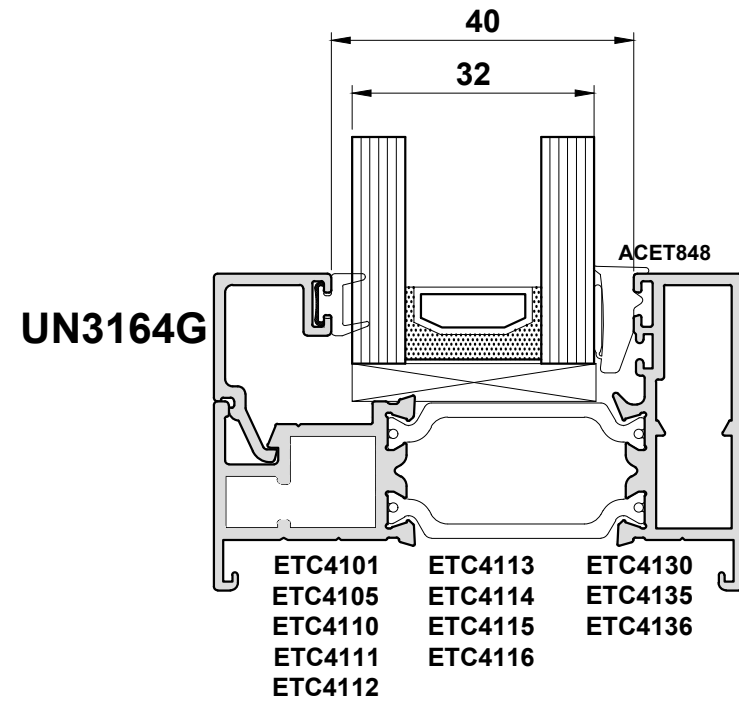
- ETC4124G
- ETC4129G



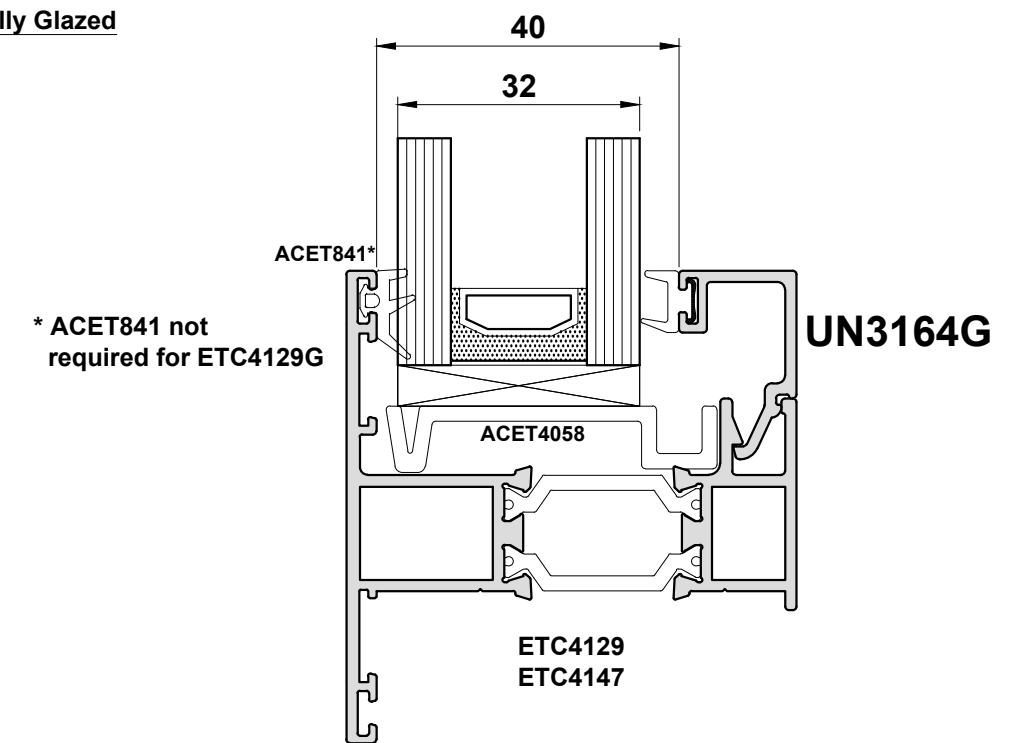
Do Not Scale From This Drawing

Quick-Glaze Bead Glass Adjuster

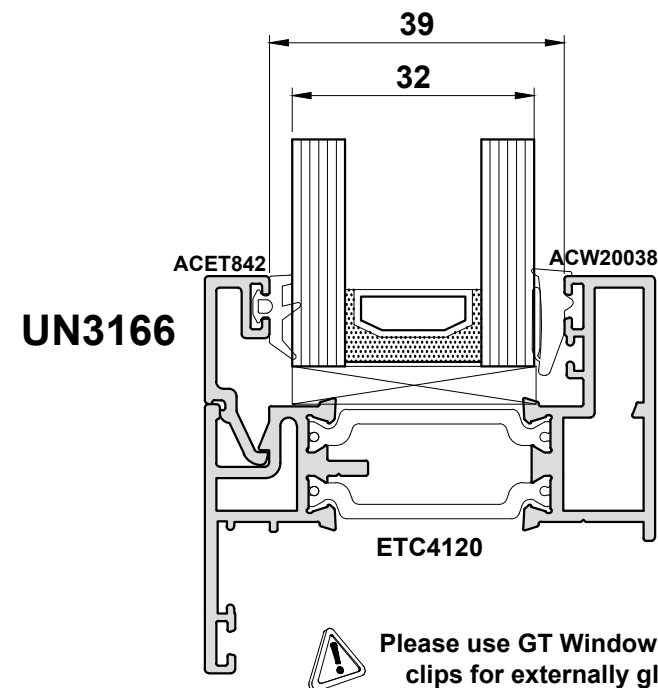
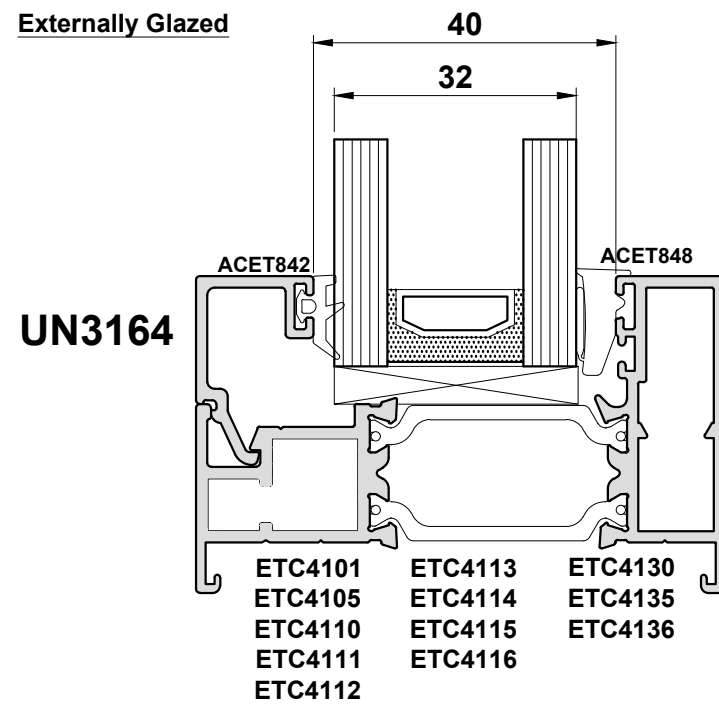
Externally Glazed



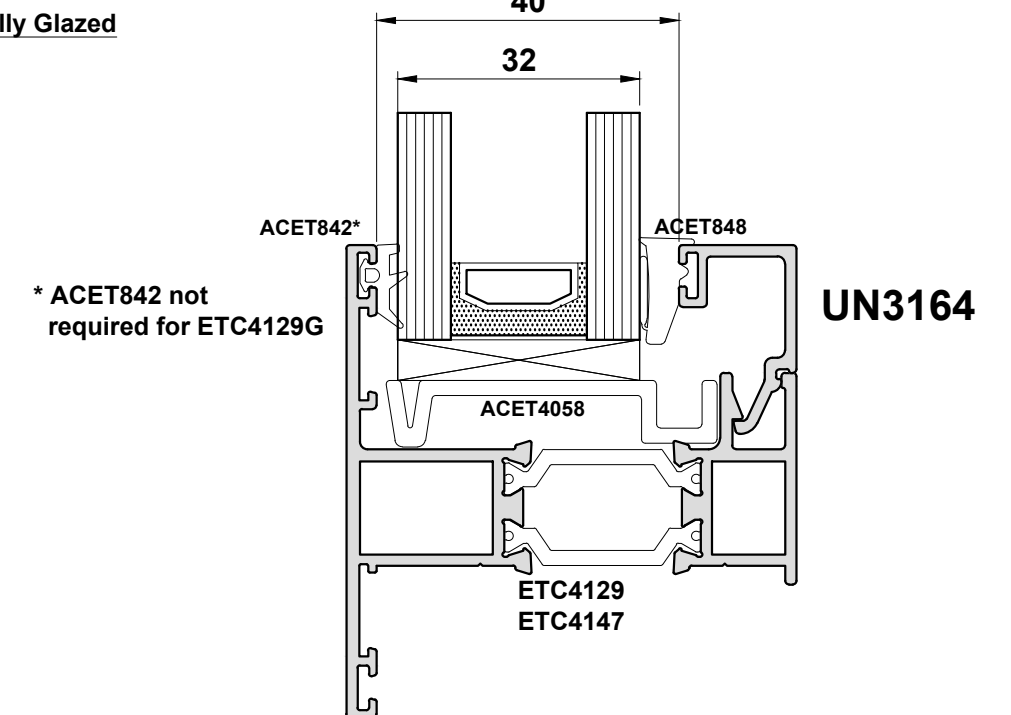
Internally Glazed



Externally Glazed

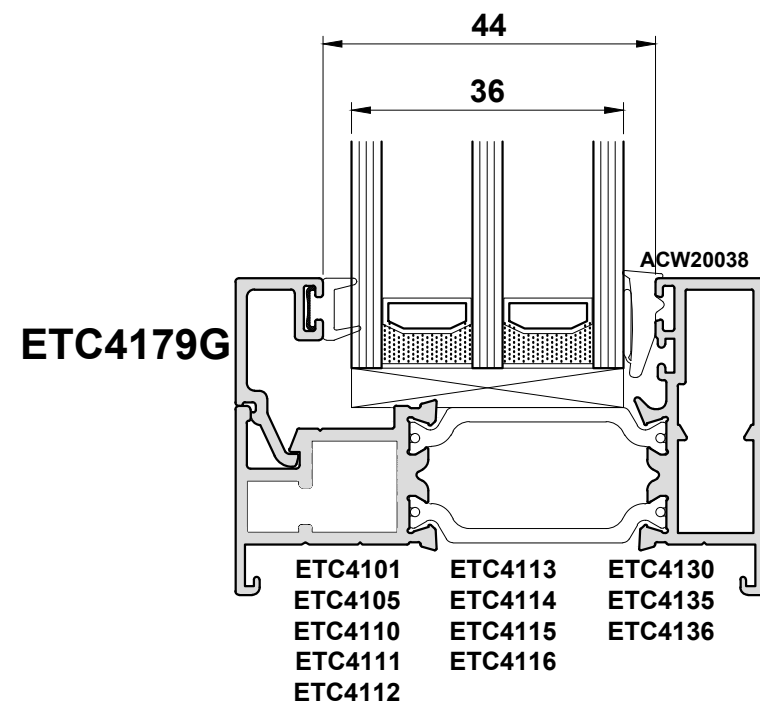


Internally Glazed



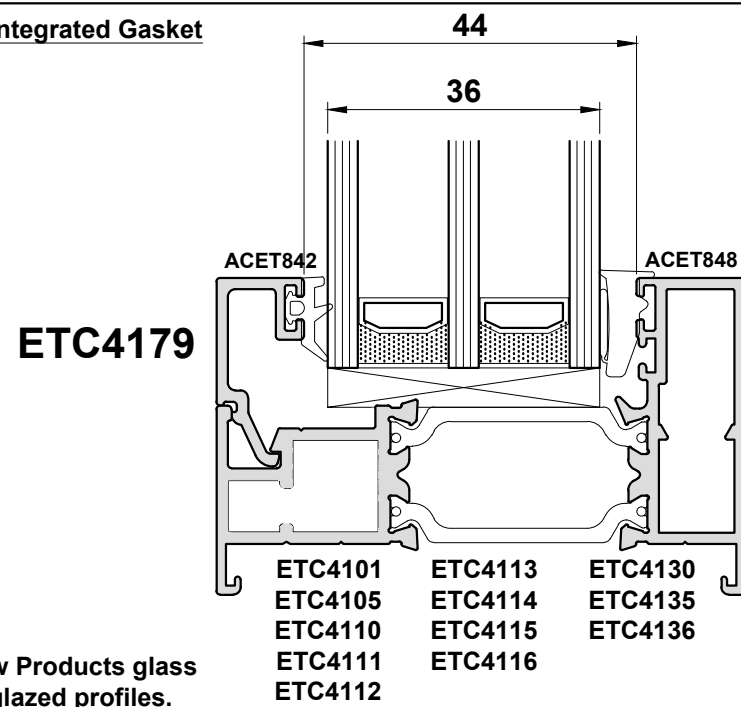
Externally Glazed

Externally glazed Alitherm 400 sections may be glazed using Quick-Glaze beads with a standard wedge gasket.



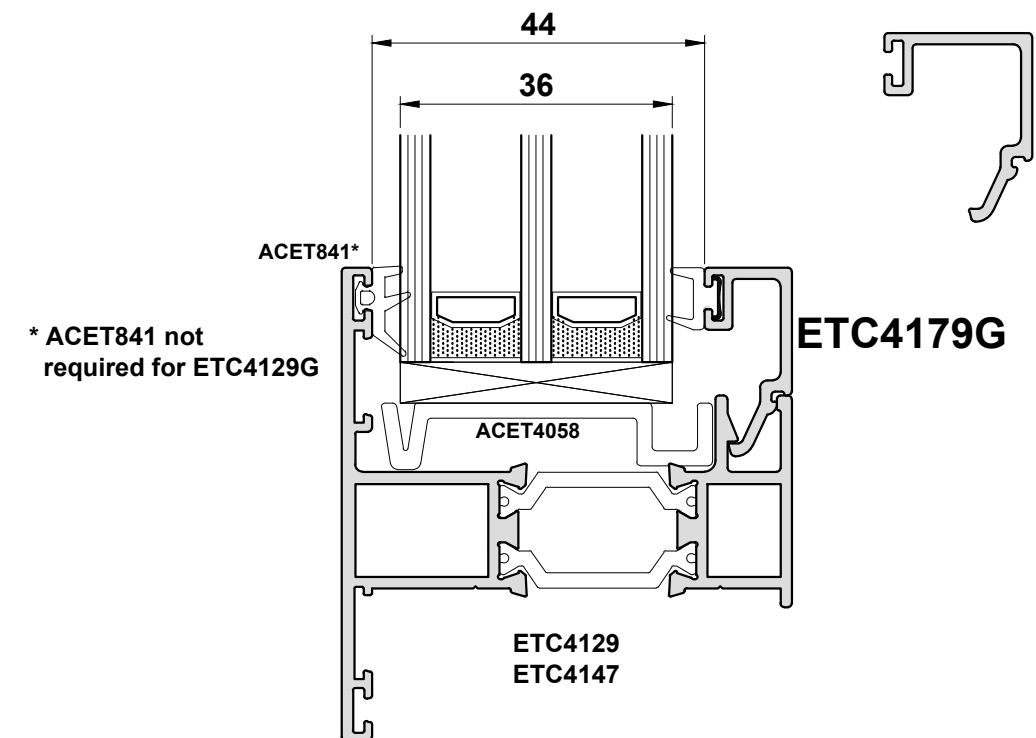
⚠ Please use GT Window Products glass clips for externally glazed profiles.

Externally Glazed without Integrated Gasket

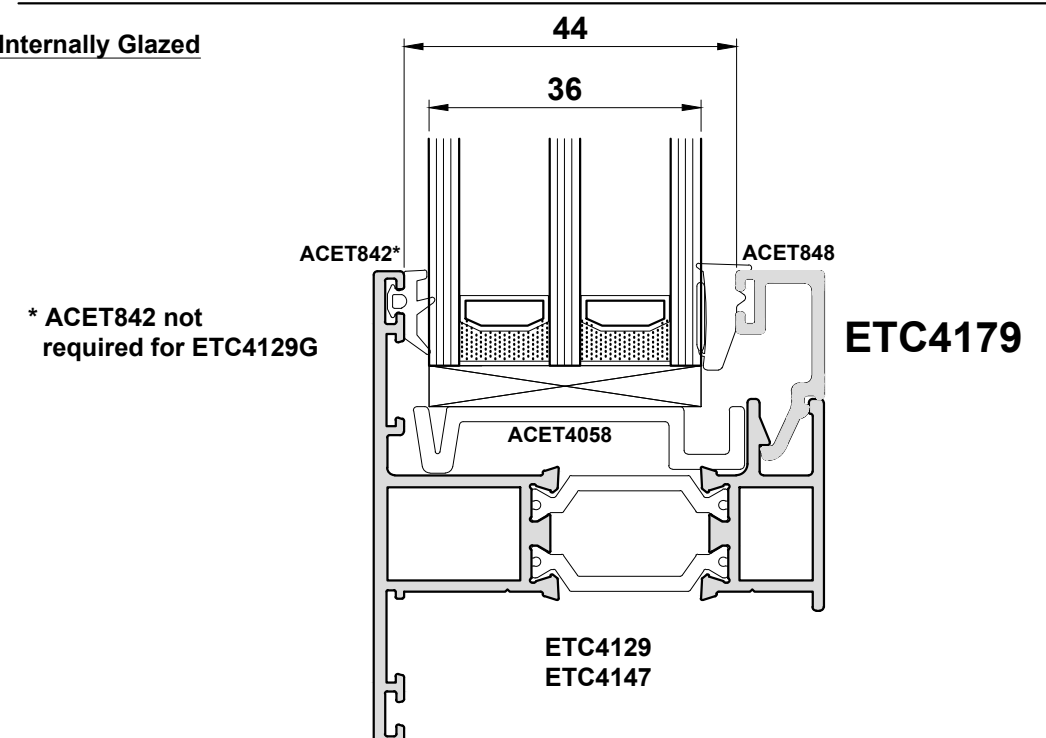


⚠ Please use GT Window Products glass clips for externally glazed profiles.

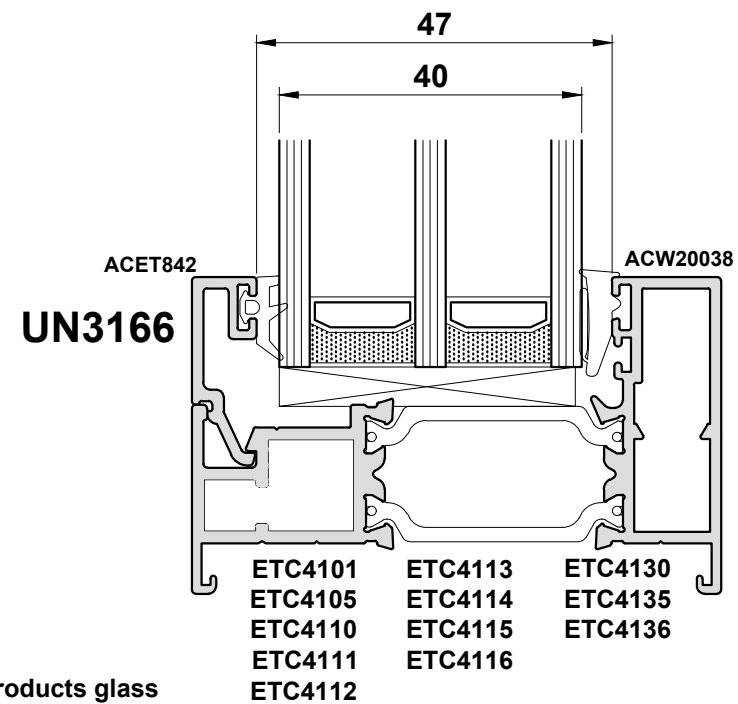
Internally Glazed



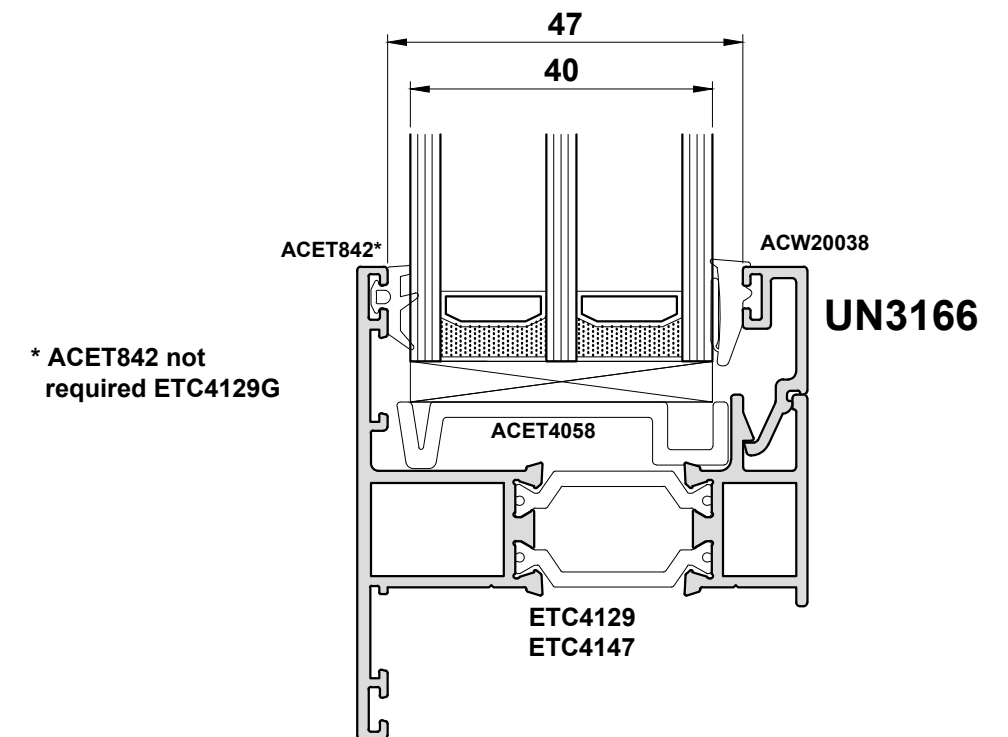
Internally Glazed



Externally Glazed without Integrated Gasket

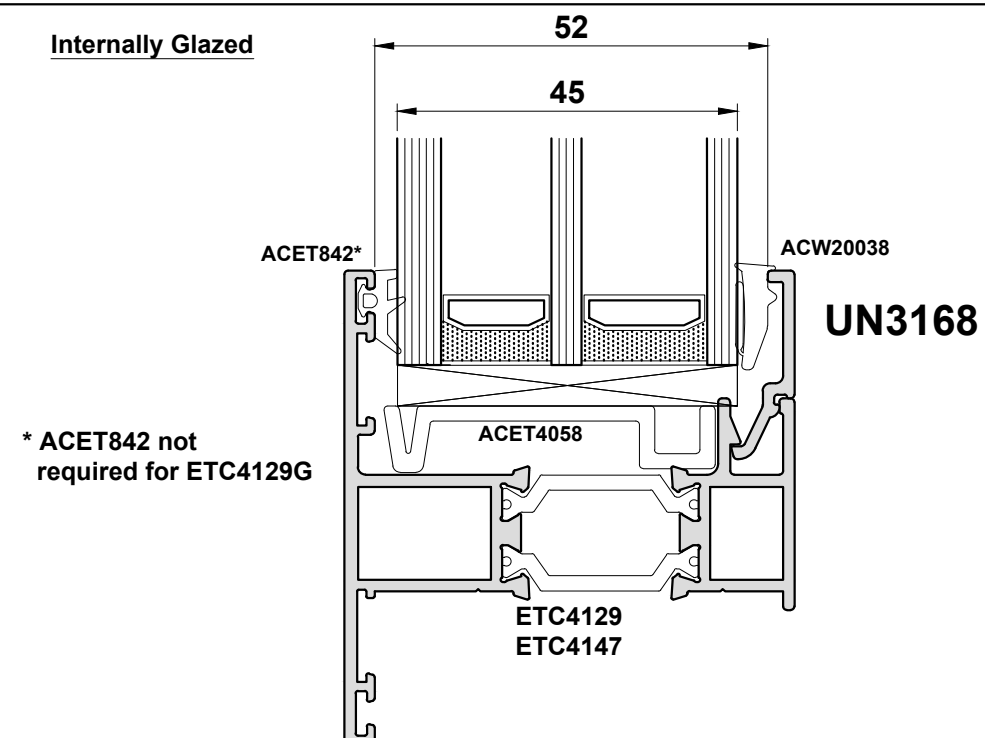


Internally Glazed

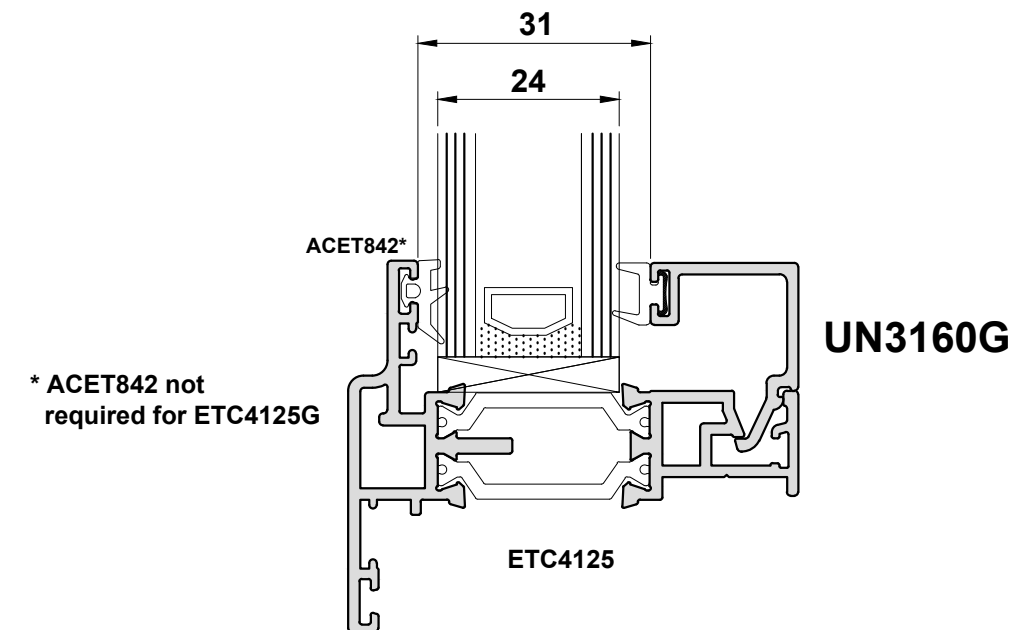
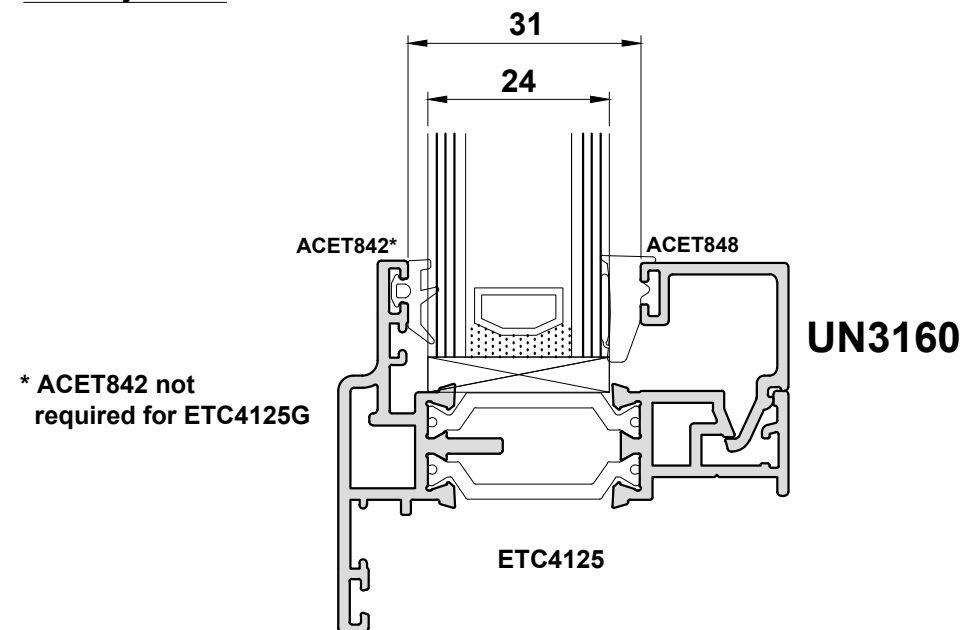


⚠ Please use GT Window Products glass clips for externally glazed profiles.

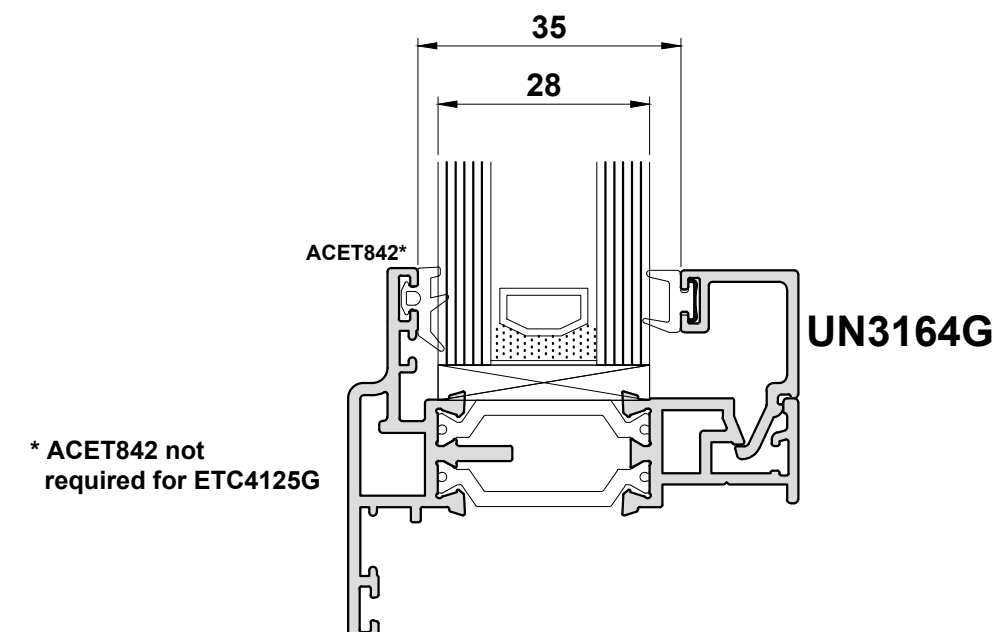
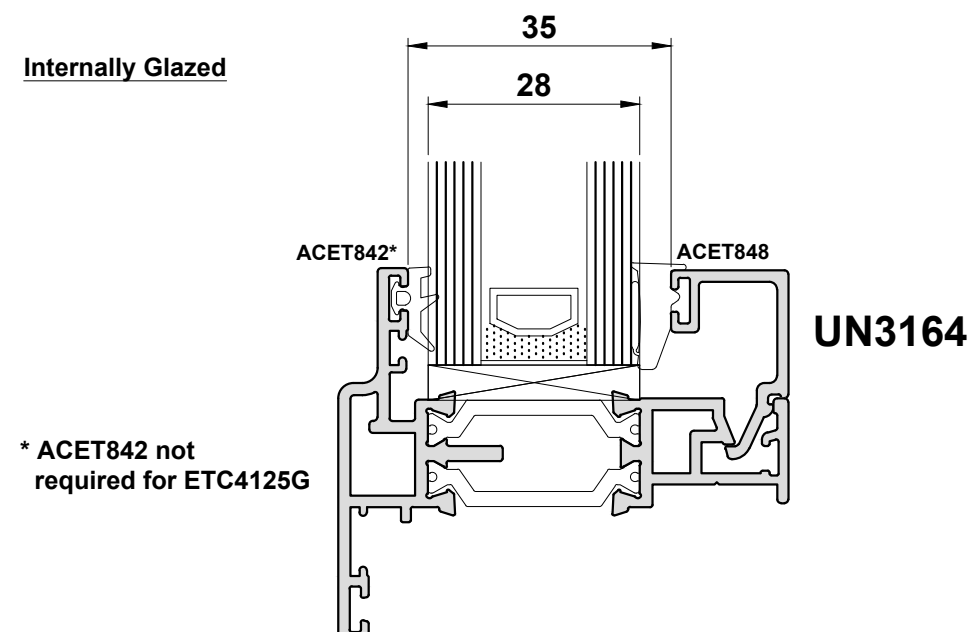
Internally Glazed



Internally Glazed



Internally Glazed

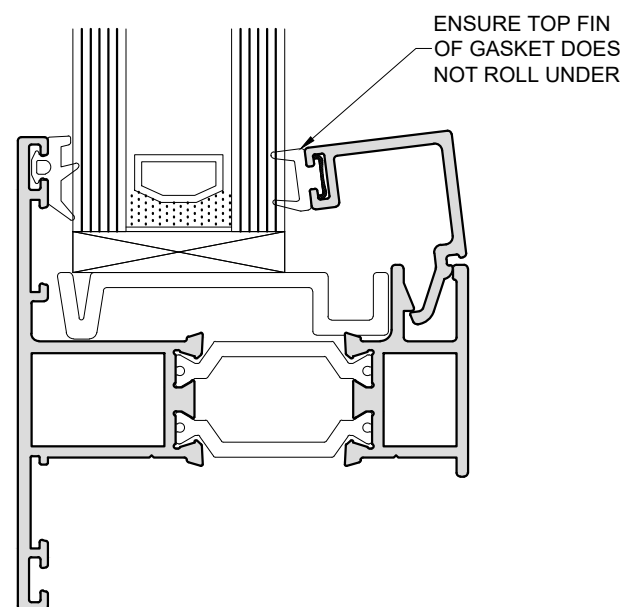
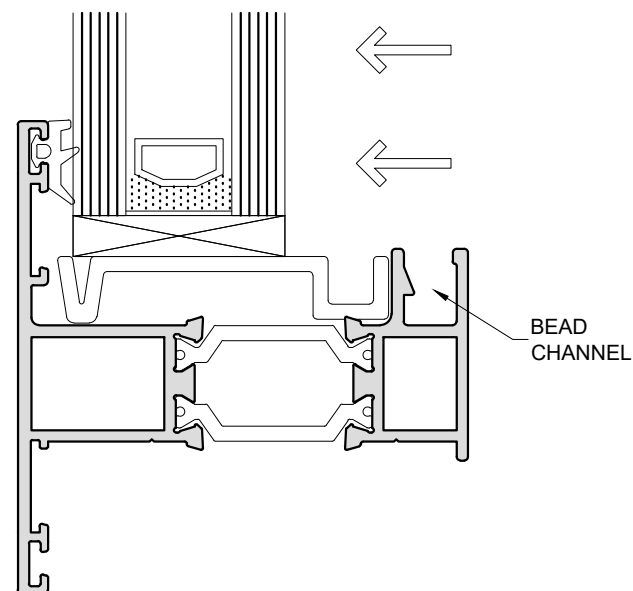


Important Note:
The handle must be fitted through UN3164 bead - see page E22

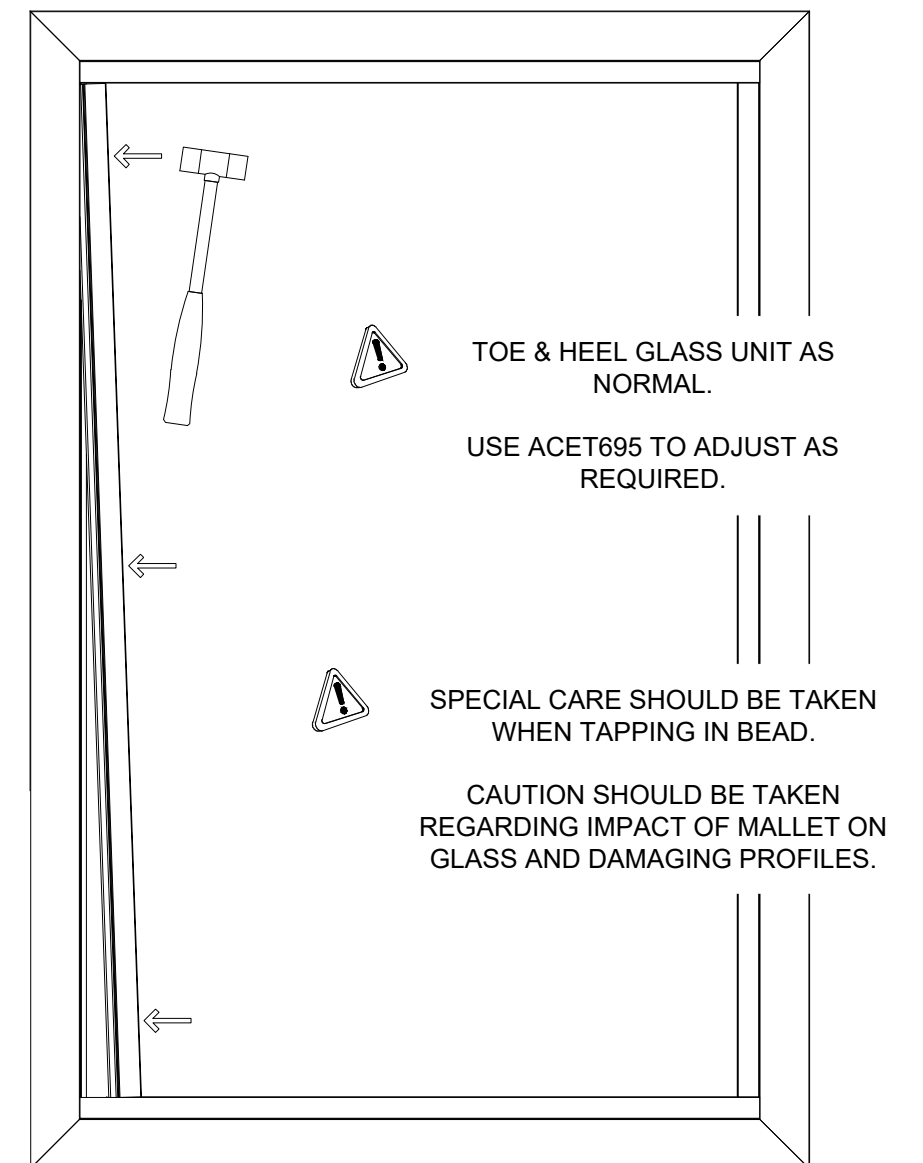
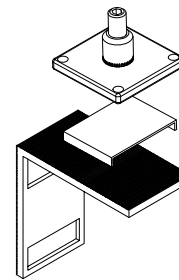
Quick-Glaze Bead Installation

QUICK-GLAZE BEAD INSTALLATION

1. INSTALL GLASS UNIT, ENSURING IT HAS BEEN PUSHED FORWARD TO ENGAGE COMPRESSION OF E GASKET.
2. BEGINNING WITH HORIZONTAL BEADS, LOCATE BEAD IN CLIP CHANNEL OF SASH AS SHOWN. INTEGRATED GASKET MAY REST AGAINST GLASS UNIT.
3. APPLY FIRM PRESSURE TO THE BEAD TO HOLD IN POSITION. THIS MAY CAUSE THE BEAD TO FULLY LOCK INTO POSITION.
4. USING A NYLON MALLET, TAP BEAD INTO CHANNEL WORKING FROM ONE END TO THE OTHER. PLEASE TAKE CARE AT THIS STAGE TO AVOID DAMAGE TO BOTH THE GLAZING UNIT AND THE BEAD.
5. REPEAT STEPS 2 - 4 TO INSTALL VERTICAL BEADS.



WE STRONGLY RECOMMEND INSTALLING ACET695 GLASS ADJUSTERS WHEN USING QUICK-GLAZE BEADS. THIS WILL REMOVE THE NEED TO REMOVE BEADS IN ORDER TO ADJUST GLASS POSITION.



Quick-Glaze Bead Removal

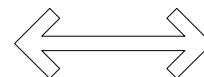
KEEP INTEGRATED GASKET

QUICK-GLAZE BEAD REMOVAL

1. STARTING ON VERTICAL BEADS, APPLY PRESSURE TO BEAD IN DIRECTION SHOWN IN ORDER TO CREATE SMALL GAP BETWEEN SASH AND BEAD.
2. GENTLY INSERT DE-GLAZING TOOL TAKING PARTICULAR CARE AS NOT TO DAMAGE PAINT FINISH.
3. SLOWLY PRISE THE BEAD UP AND AWAY FROM THE SASH.
4. THE BEAD SHOULD NOW BE EASILY REMOVABLE FROM QUICK-GLAZE BEAD CHANNEL IN SASH

BEAD AND INTEGRATED GASKET CAN BE REUSED.

OR

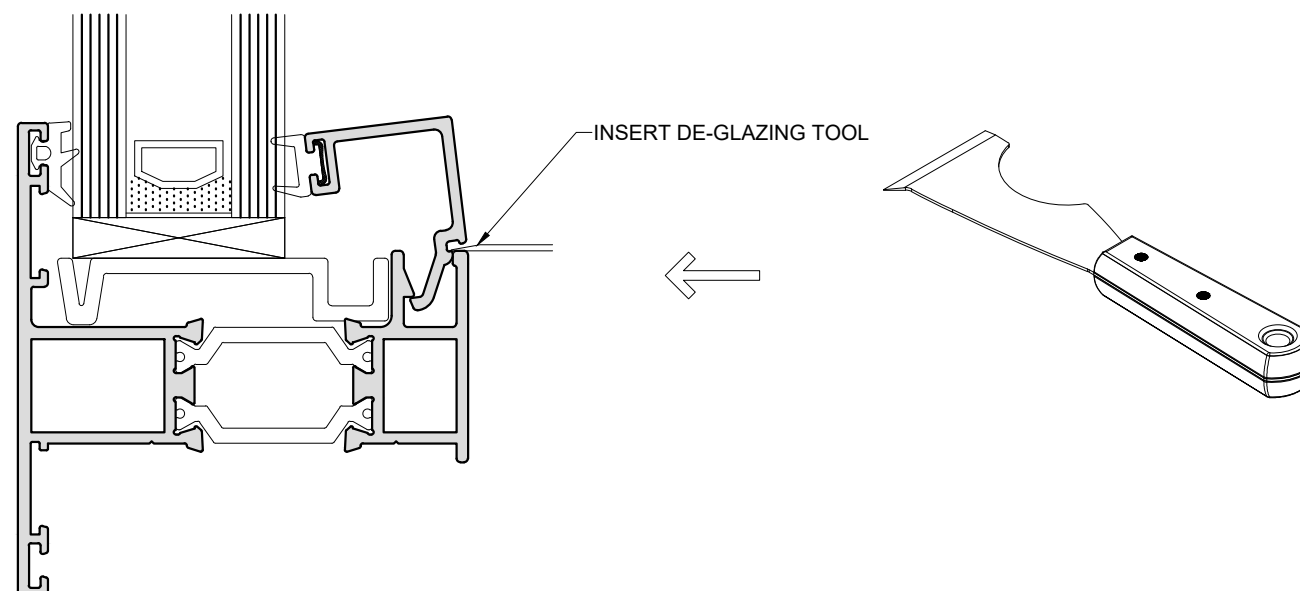
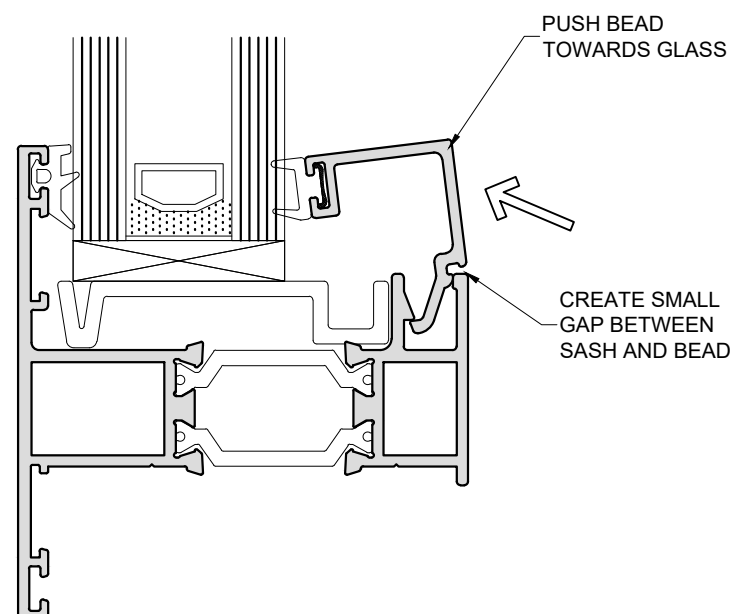


REPLACE INTEGRATED GASKET

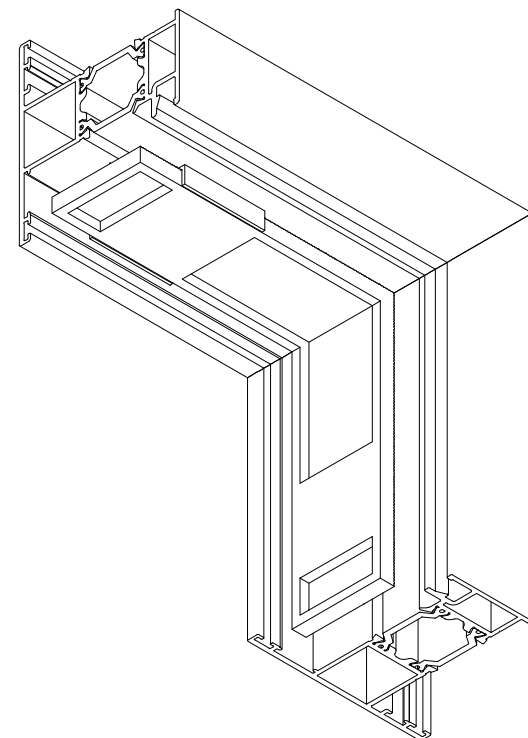
QUICK-GLAZE BEAD REMOVAL

1. USING SMALL FLAT HEADED SCREWDRIVER OR SIMILAR, WEDGE TIP BETWEEN CO EXTRUDED GASKET AND ALUMINIUM.
2. IN A LEVERING MOTION, PRISE THE GASKET AWAY FROM THE ALUMINIUM. PARTICULAR CARE SHOULD BE TAKEN NOT TO DAMAGE THE GLASS UNIT AND ALUMINIUM.
3. COMPLETE THIS AT SEVERAL LOCATIONS ALONG THE LENGTH OF THE BEAD.
4. REMOVE GASKET AND DISCARD. THIS GASKET CAN NO LONGER BE USED.
5. THE BEAD SHOULD NOW BE EASILY REMOVABLE FROM TAP IN BEAD CHANNEL IN SASH

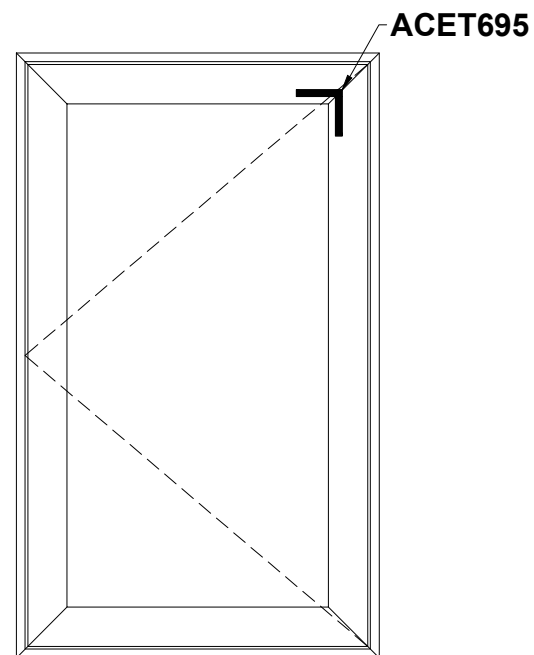
PLEASE SEE GLAZING CHART FOR REPLACEMENT GASKET CODES.



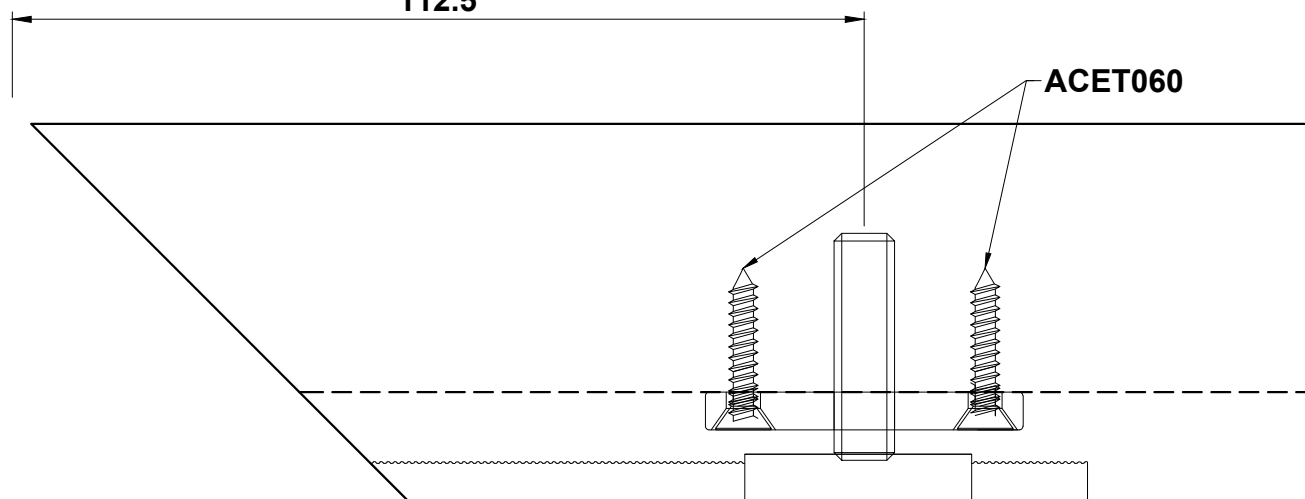
Quick-Glaze Bead Glass Adjuster



112.5



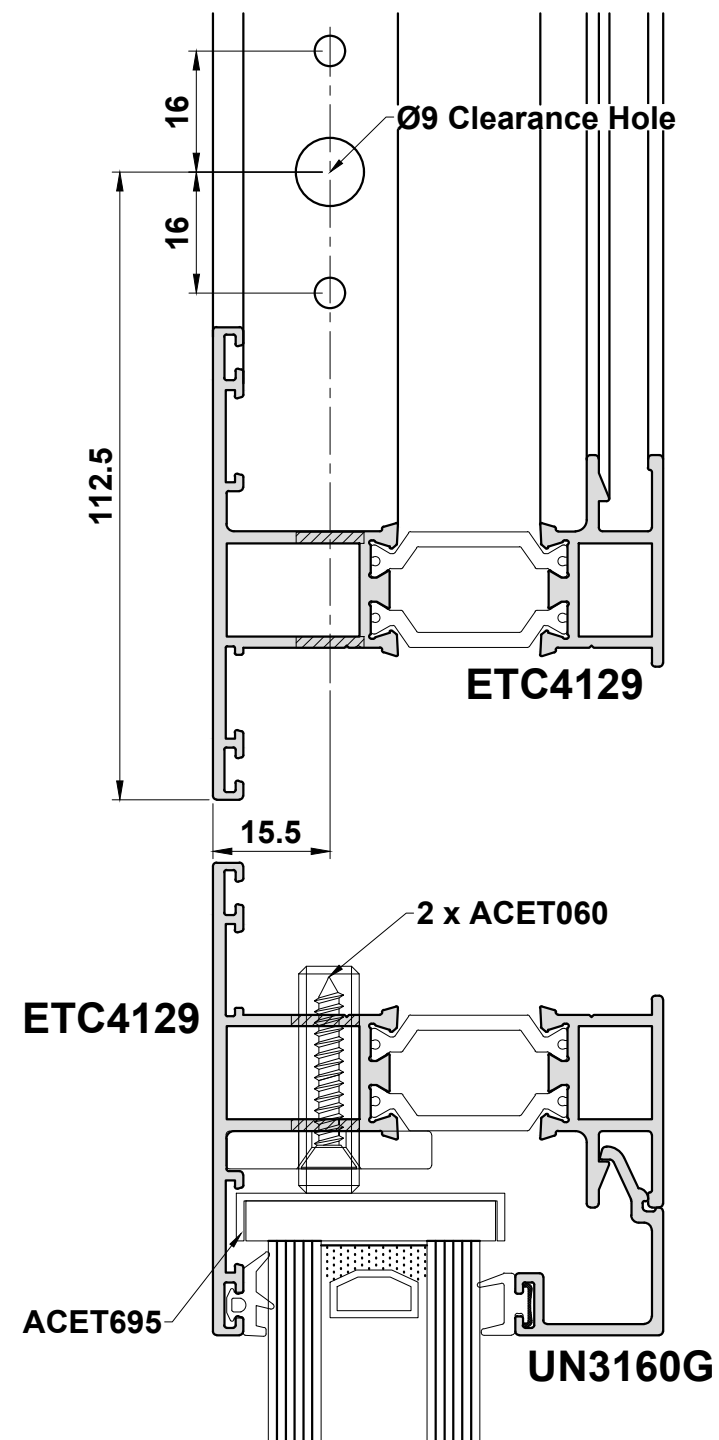
ACET695



ACET060

ACET695

WE STRONGLY RECOMMEND INSTALLING ACET695 GLASS ADJUSTERS WHEN USING QUICK-GLAZE BEADS. THIS WILL REMOVE THE NEED TO REMOVE BEADS IN ORDER TO ADJUST GLASS POSITION.



Ø9 Clearance Hole

ETC4129

ETC4129

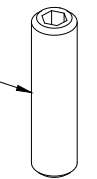
2 x ACET060

ACET695

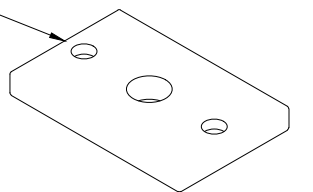
UN3160G

ACET695 Kit Includes:

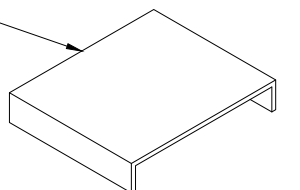
Adjusting Screw



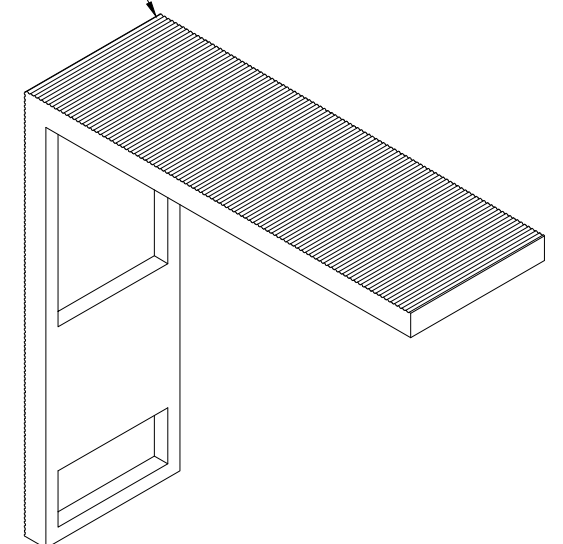
Adjustable Block



Steel Cover



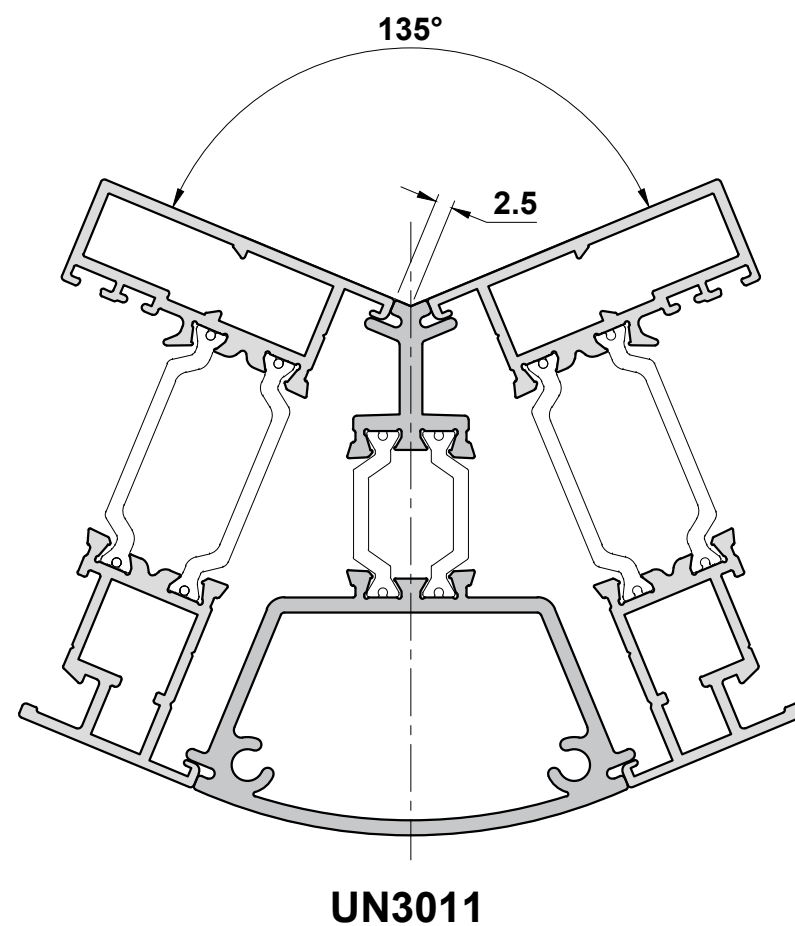
ABS Corner



Fixed Bay Pole Angle / Deduction

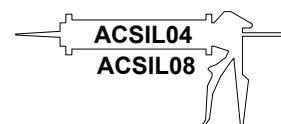
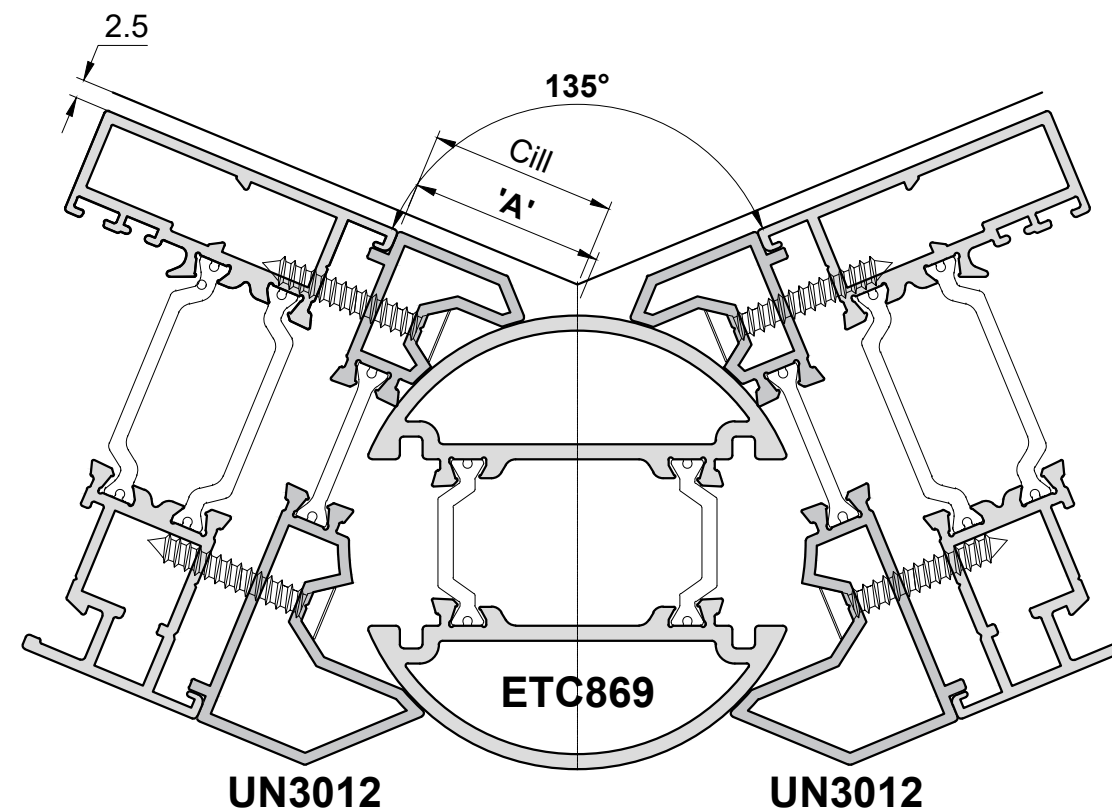
Sections

ETC4110
ETC4111
ETC4112
ETC4115



Sections

ETC4110
ETC4111
ETC4112
ETC4115

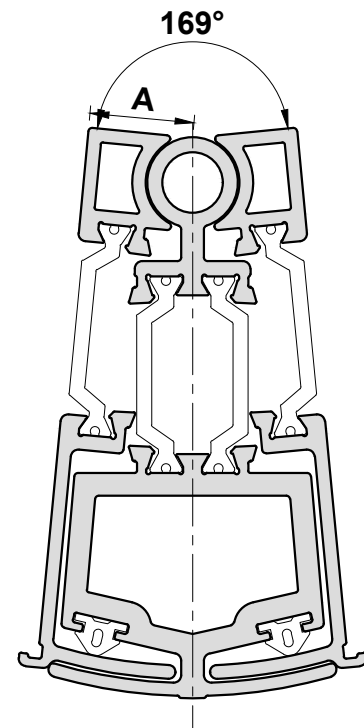


Important Note:
All joints must be adequately
sealed using ACSIL04

ANGLE	DEDUCTION 'A'	INT. CILL DEDUCTION
180°	37.5	37.5
175°	36	36
170°	35	35
165°	33.5	33.5
160°	32.5	32
155°	31	30.5
150°	30	29
145°	28.5	27.5
140°	27	26
135°	25.5	24.5

'A' & Cill deductions are the
same at angles 180°-165°

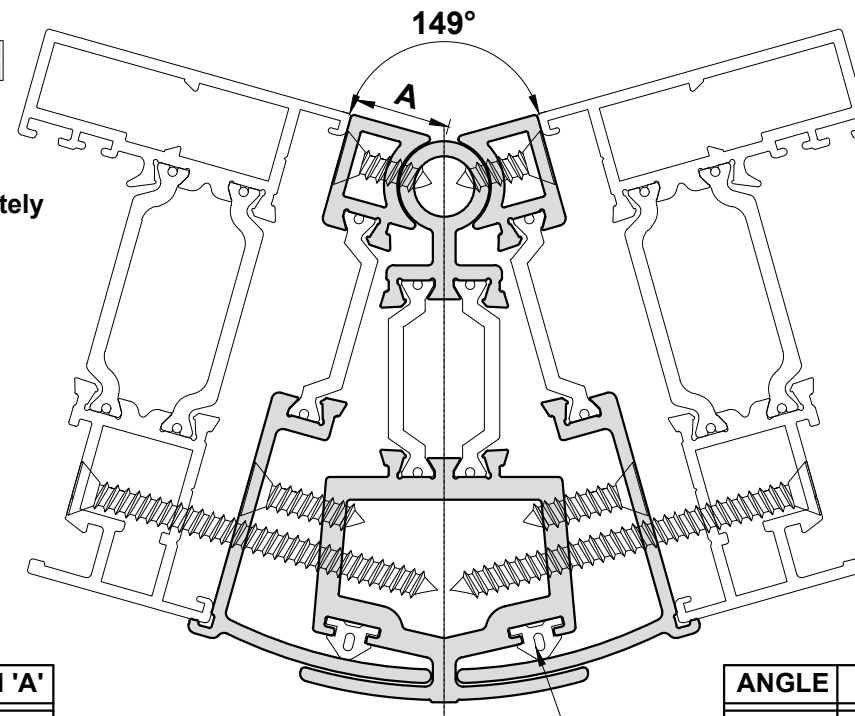
70mm Outer Frame Bay Pole Angles/Deductions



ACSIL04
ACSIL08

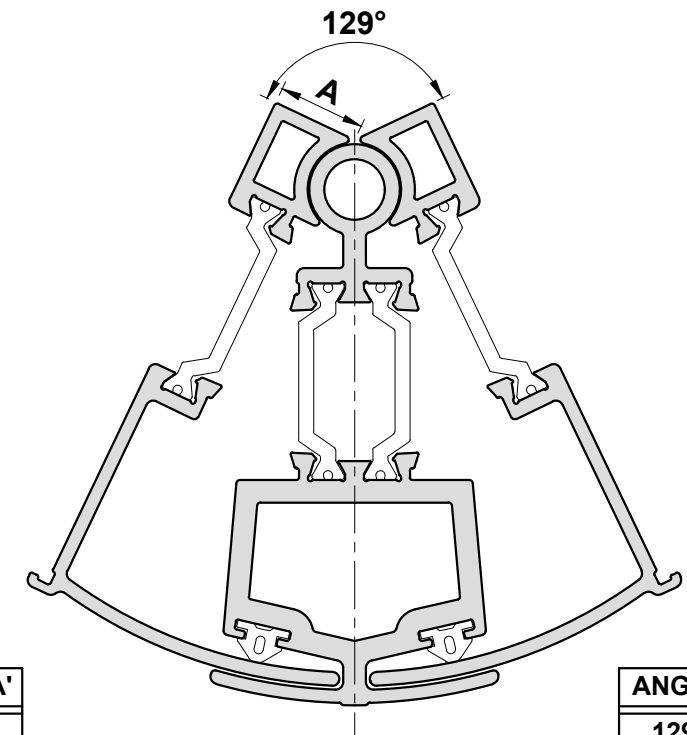
Important Note:
All joints must be adequately
sealed using ACSIL04

ANGLE	DEDUCTION 'A'
169°	14
165°	13.5
160°	13.6
155°	13
150°	13

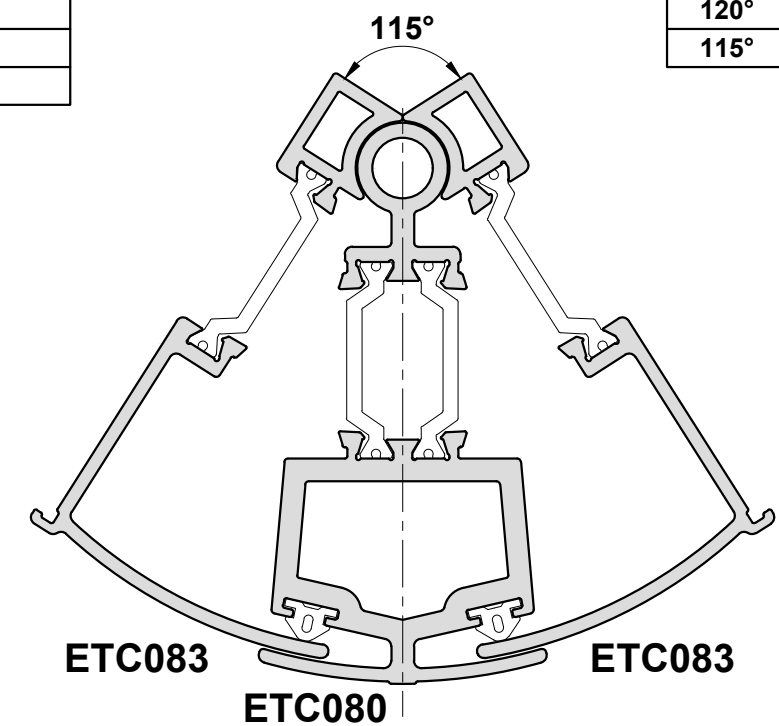
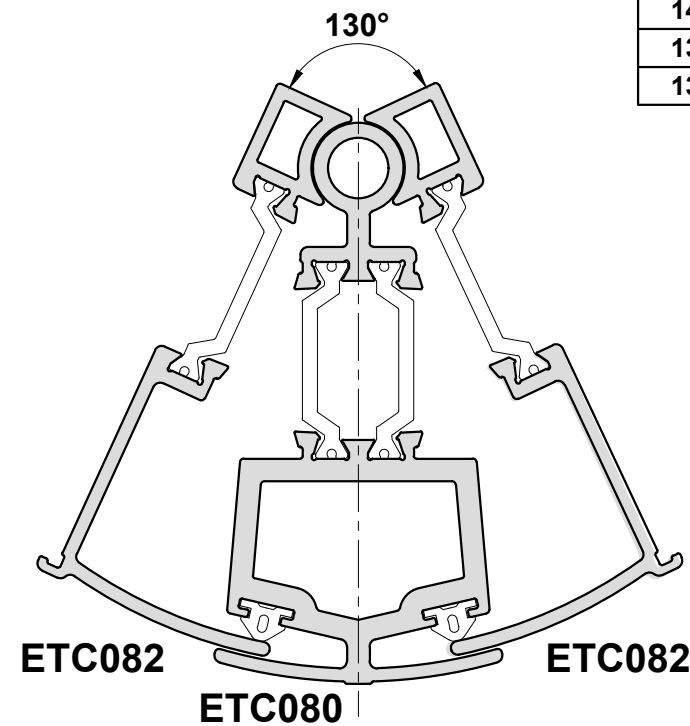
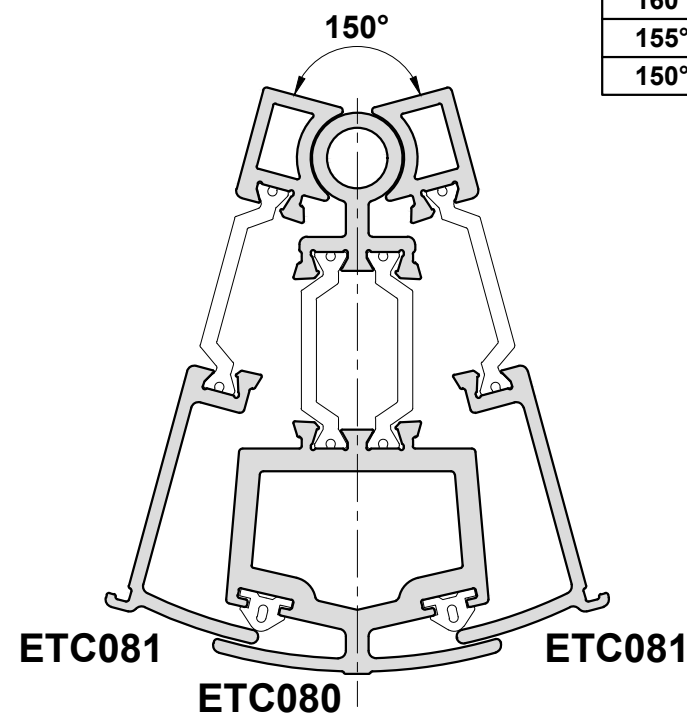


ACVS010

ANGLE	DEDUCTION 'A'
149°	12.5
145°	12.5
140°	12
135°	12
130°	11.5



ANGLE	DEDUCTION 'A'
129°	11.5
125°	11.5
120°	11
115°	10.5

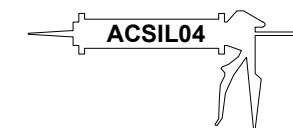
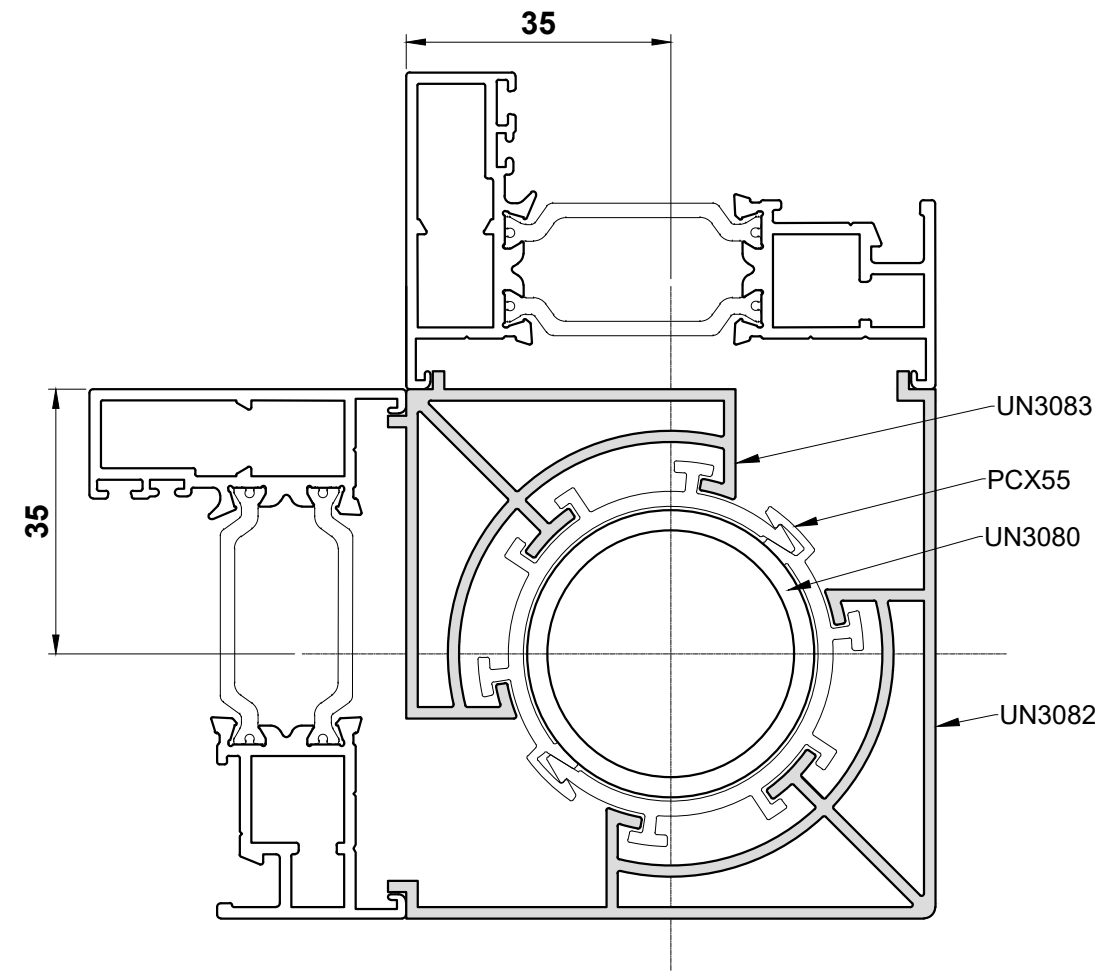
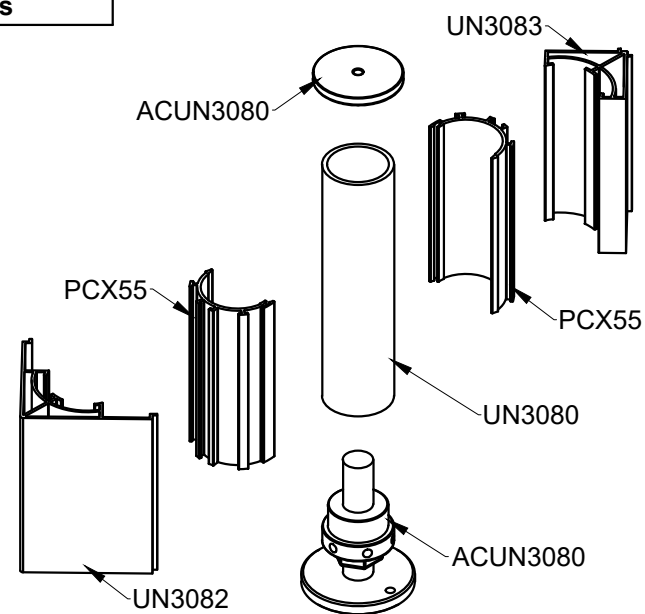


90° Jackable Bay Pole

Note: Installation to comply with relevant building regulations and British standards :-

- BS8213-4 Code of Practice for the survey and installation of window and external doorsets.
- Approved document A structure.
- Approved document C resistance to the passage of moisture.

Height (mm)	Load Bearing
1000	Capped at 2 Tonnes
1250	1.5 Tonnes
1500	1.1 Tonnes
1750	0.8 Tonnes
2000	0.6 Tonnes
2250	0.5 Tonnes
2500	0.4 Tonnes

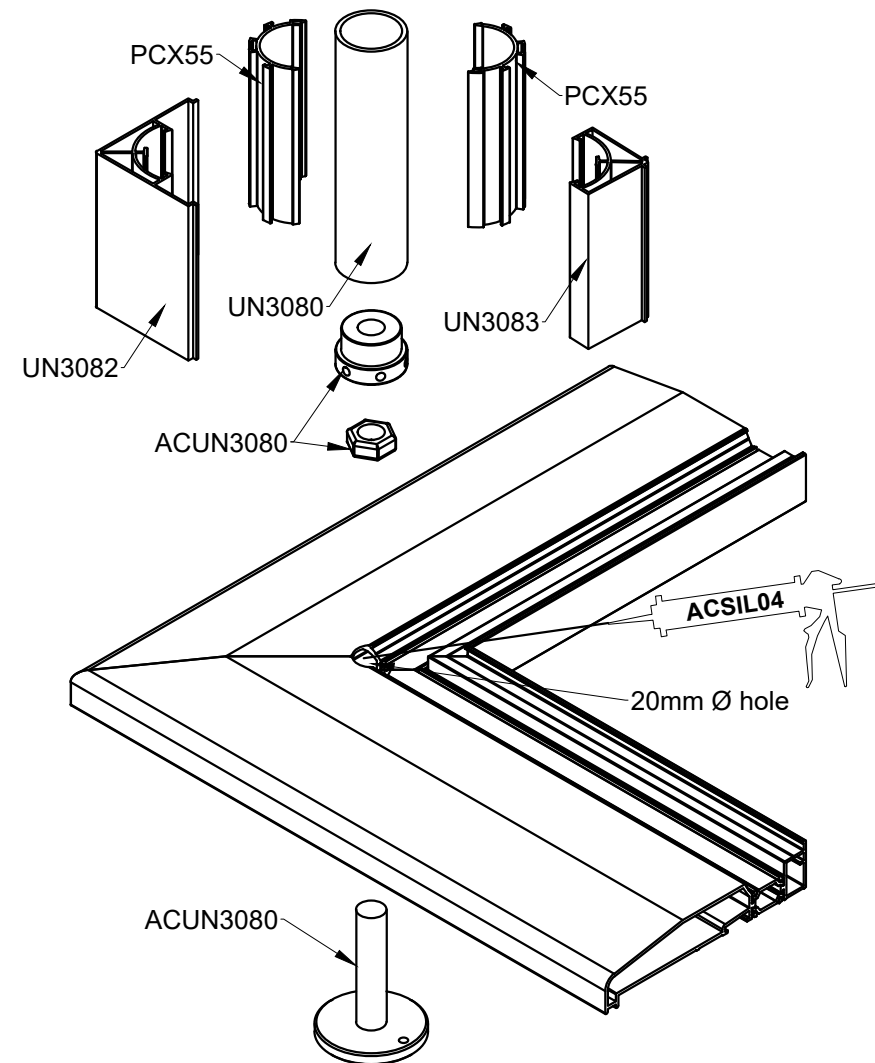


Important Note:
All joints must be adequately sealed using ACSIL04

90° Jackable Bay Pole

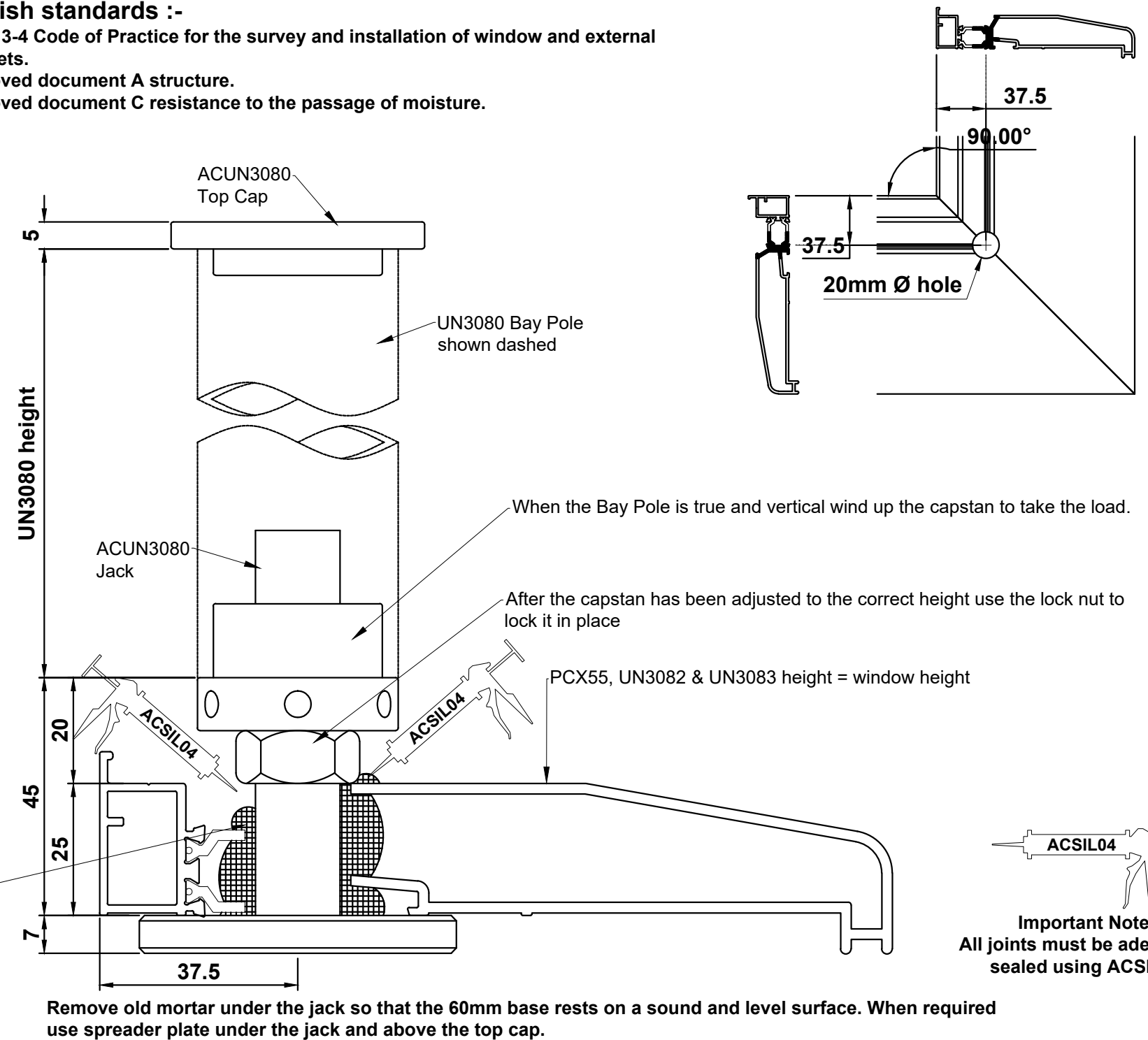
Note: Installation to comply with relevant building regulations and British standards :-

- BS8213-4 Code of Practice for the survey and installation of window and external doorsets.
- Approved document A structure.
- Approved document C resistance to the passage of moisture.



Fully seal between the jack and sub cill with ACSIL04 so that water is not able to track through the 20mm hole.

When the cill does not form a complete water barrier then damp proof course should be used.
See approved document C section 5.9



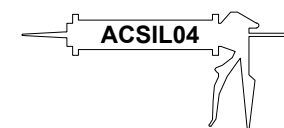
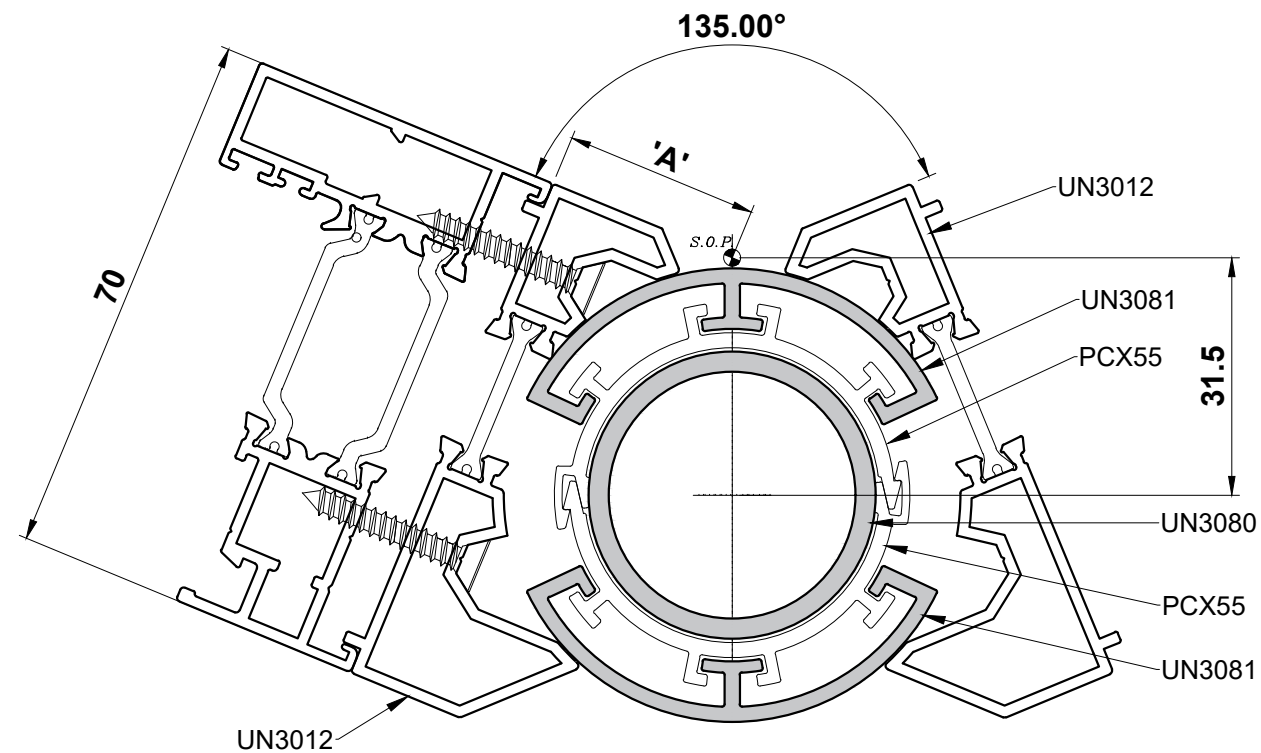
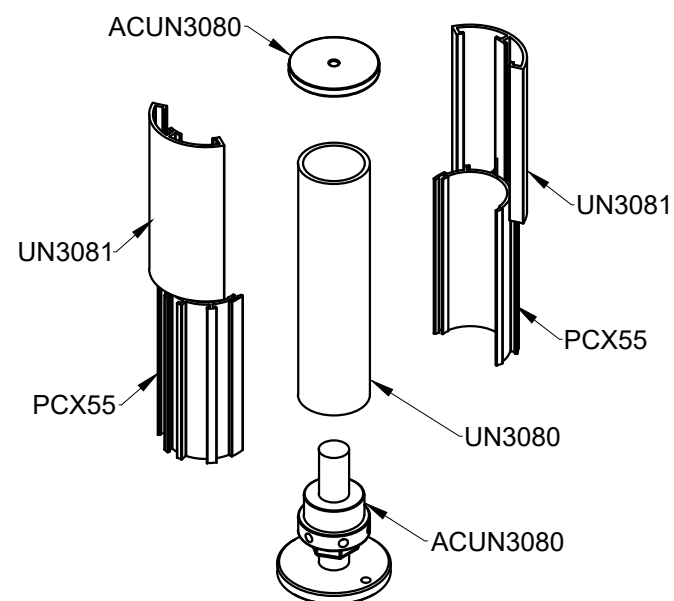
Important Note:
All joints must be adequately sealed using ACSIL04

Variable Angle Jackable Bay Pole

Note: Installation to comply with relevant building regulations and British standards :-

- BS8213-4 Code of Practice for the survey and installation of window and external doorsets.
- Approved document A structure.
- Approved document C resistance to the passage of moisture.

Height (mm)	Load Bearing
1000	Capped at 2 Tonnes
1250	1.5 Tonnes
1500	1.1 Tonnes
1750	0.8 Tonnes
2000	0.6 Tonnes
2250	0.5 Tonnes
2500	0.4 Tonnes



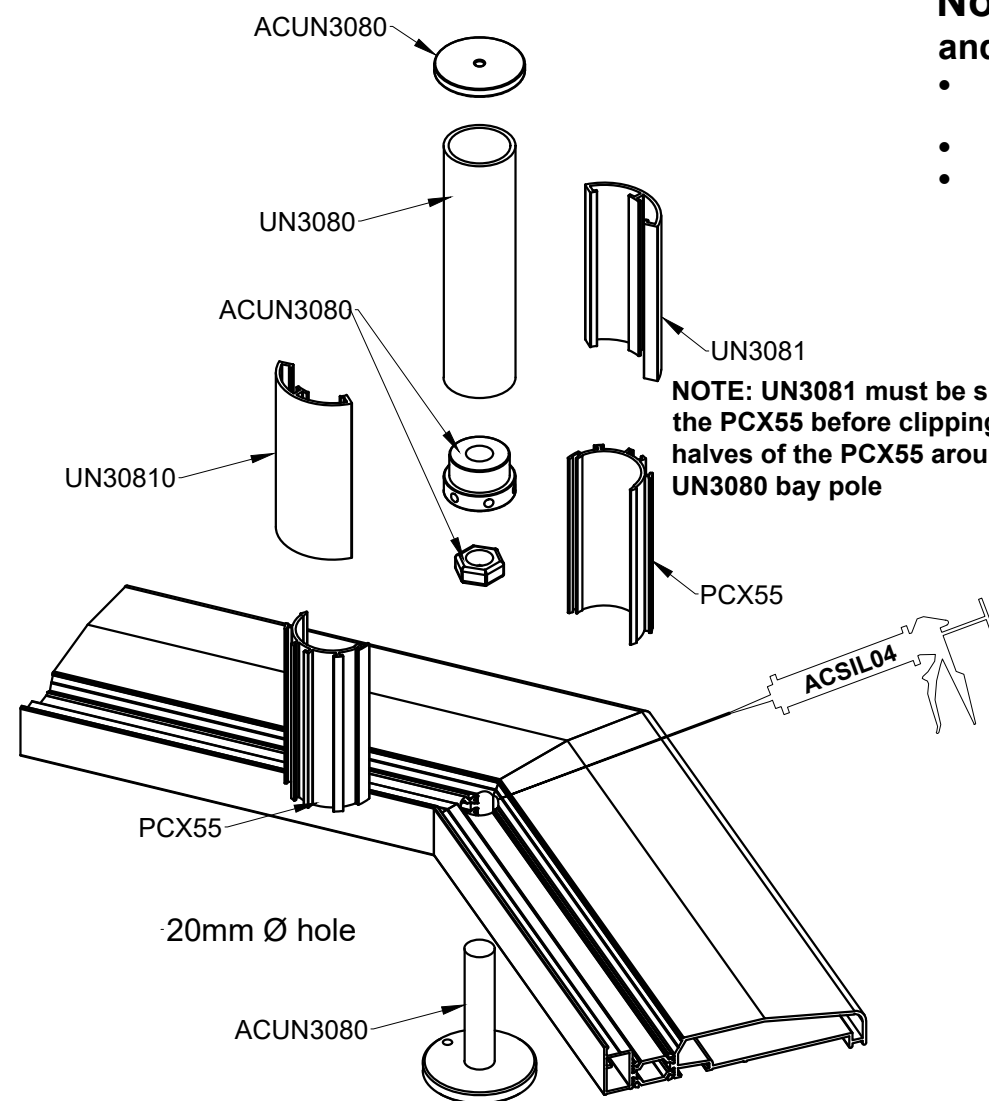
Important Note:
All joints must be adequately sealed using ACSIL04

ANGLE	DEDUCTION 'A'
180°	37.5
175°	36
170°	35
165°	33.5
160°	32.5
155°	31
150°	30
145°	28.5
140°	27
135°	25.5

Variable Angle Jackable Bay Pole

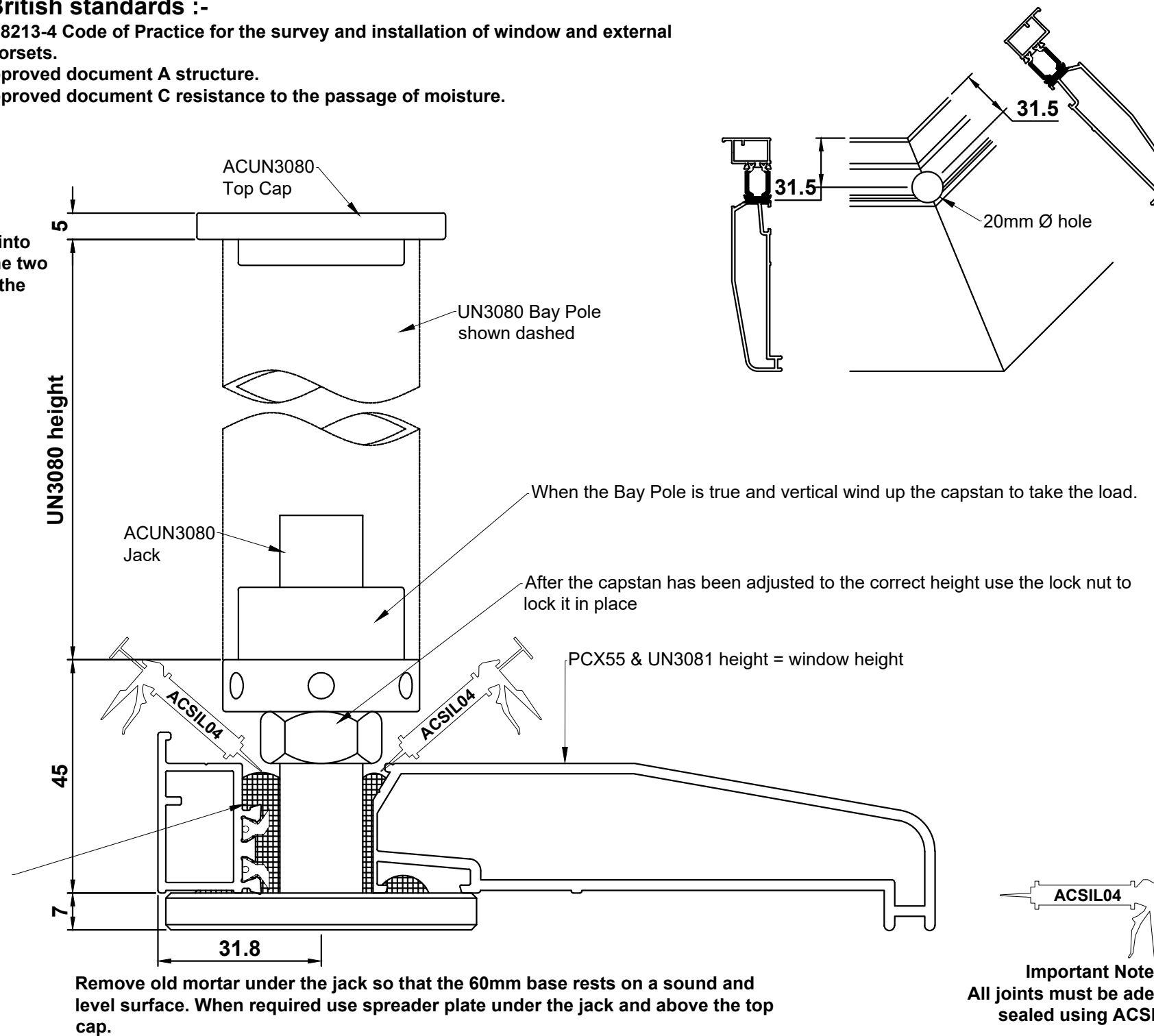
Note: Installation to comply with relevant building regulations and British standards :-

- BS8213-4 Code of Practice for the survey and installation of window and external doorsets.
- Approved document A structure.
- Approved document C resistance to the passage of moisture.



Fully seal between the jack and sub cill with ACSIL04 so that water is not able to track through the 20mm hole.

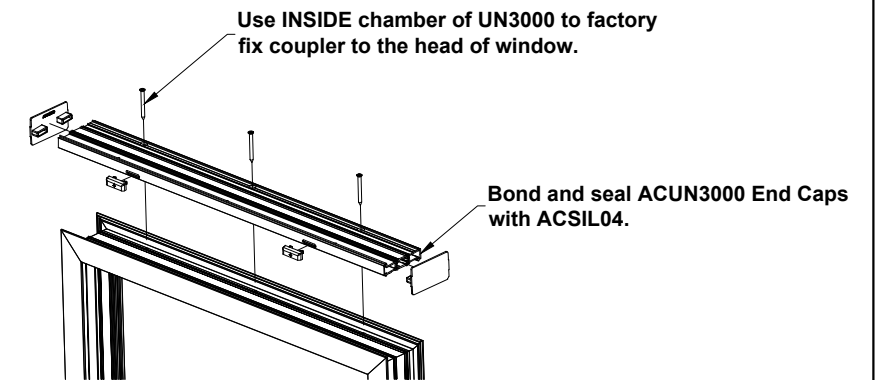
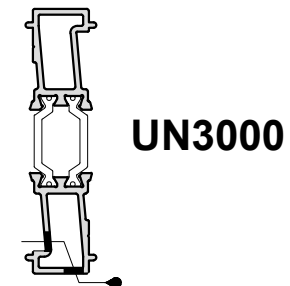
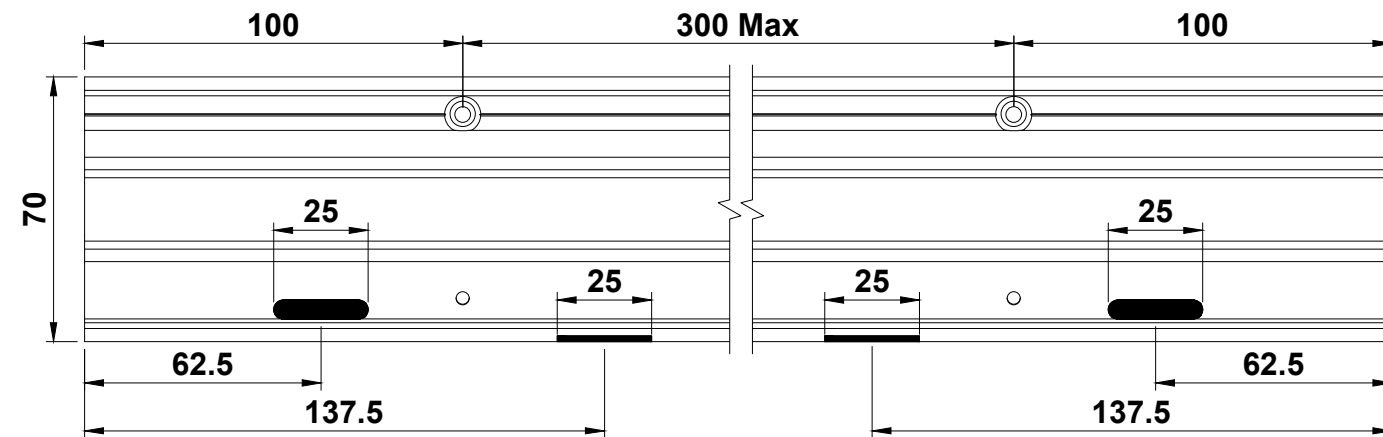
When the cill does not form a complete water barrier then damp proof course should be used.
See approved document C section 5.9



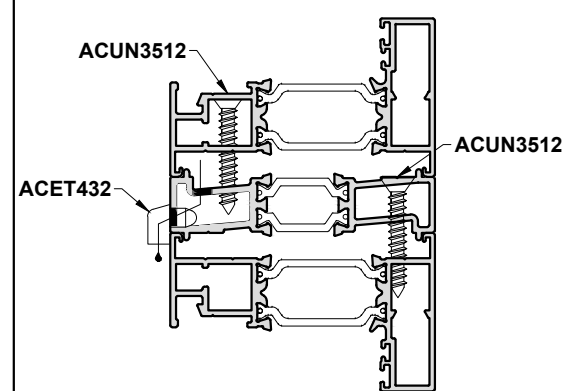
Important Note:
All joints must be adequately sealed using ACSIL04

Zone Drainage of Jamb Cavity

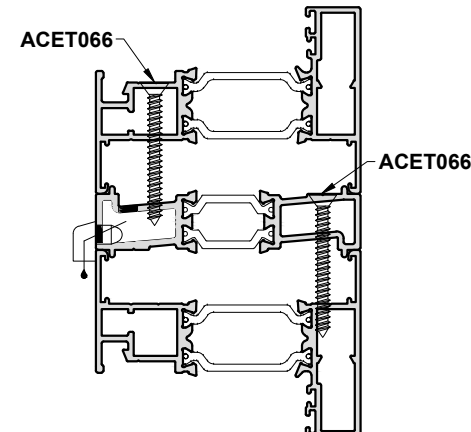
CWCT Built up wall guidance recommends drainage of Jamb Cavity



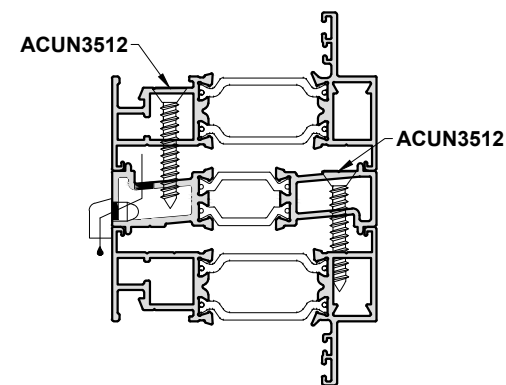
Important Note: Seal all joints to UN3000 using ACSIL04.



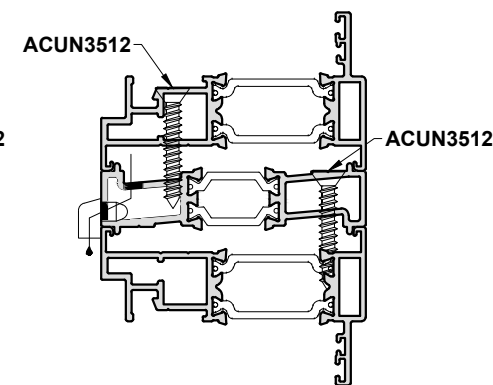
ETC4110



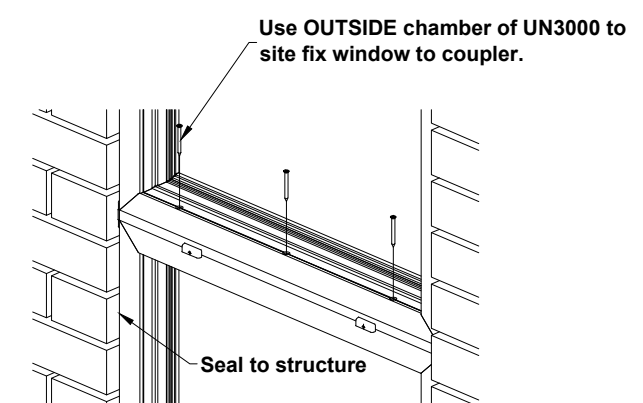
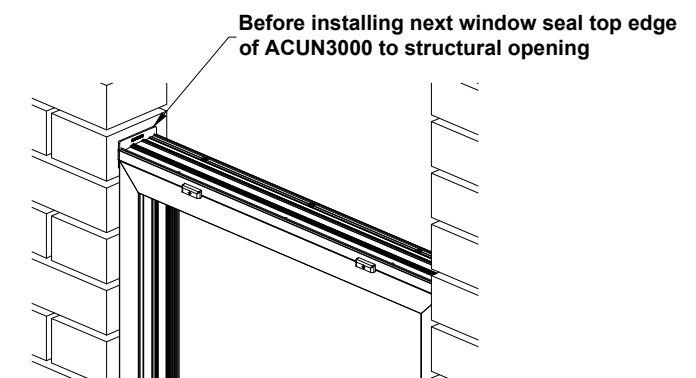
**ETC4111
ETC4116**



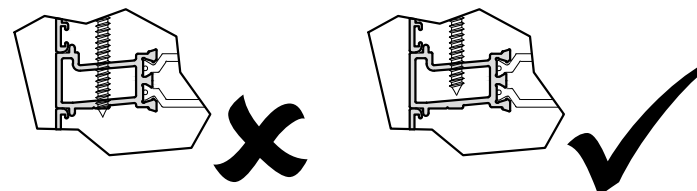
ETC4112



ETC4115

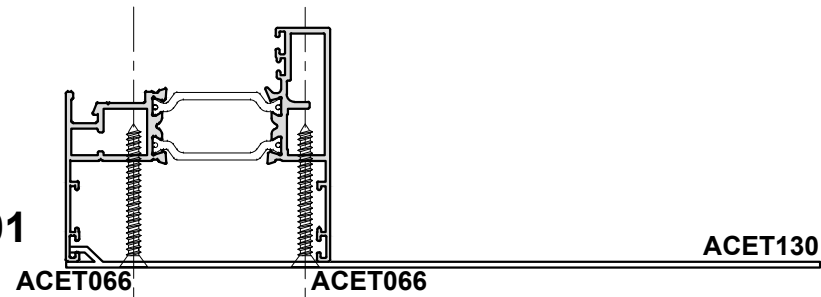


Important Note: Do not screw through drainage channel.

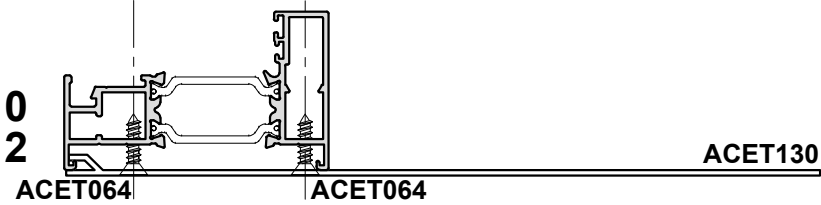


Fixing Strap Details

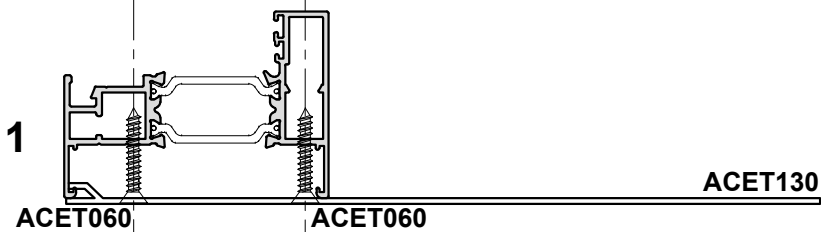
ETC4101



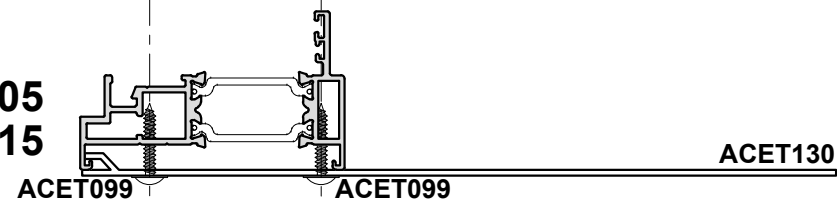
**ETC4110
ETC4112**



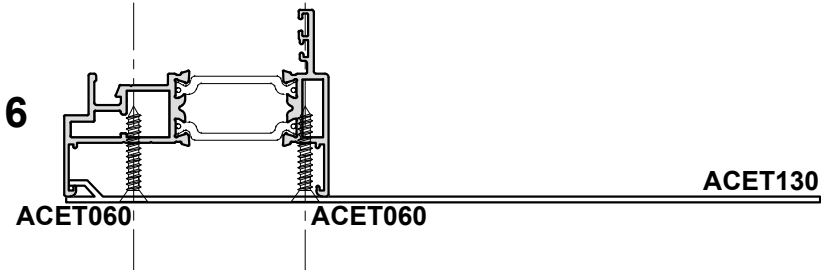
ETC4111



**ETC4105
ETC4115**

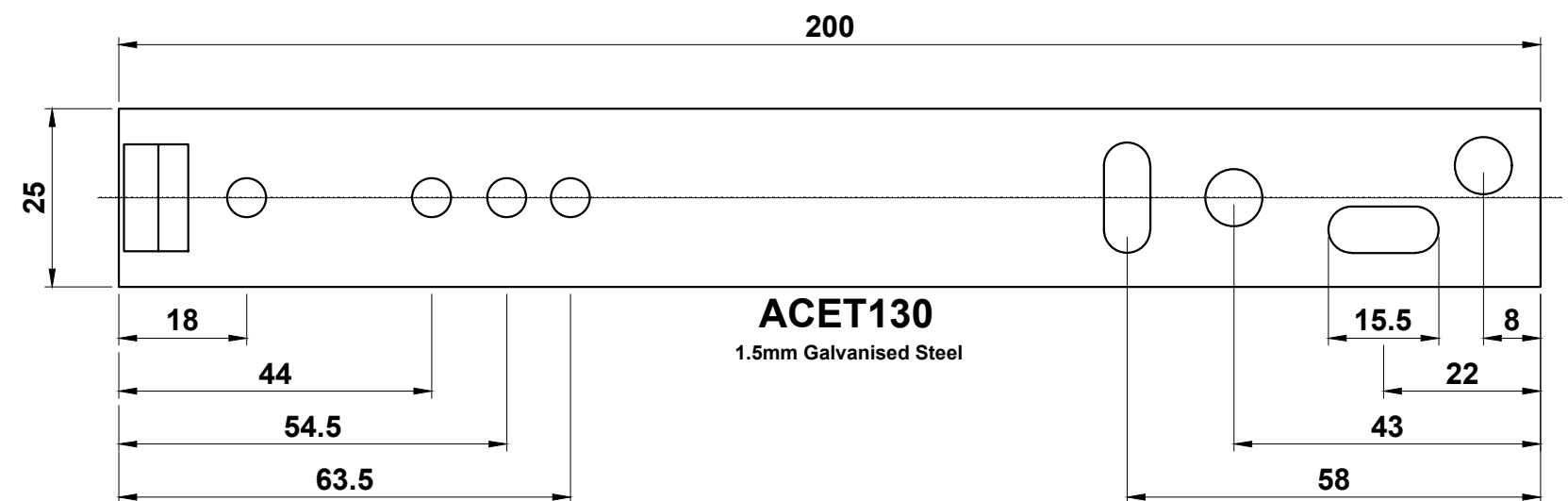


ETC4116

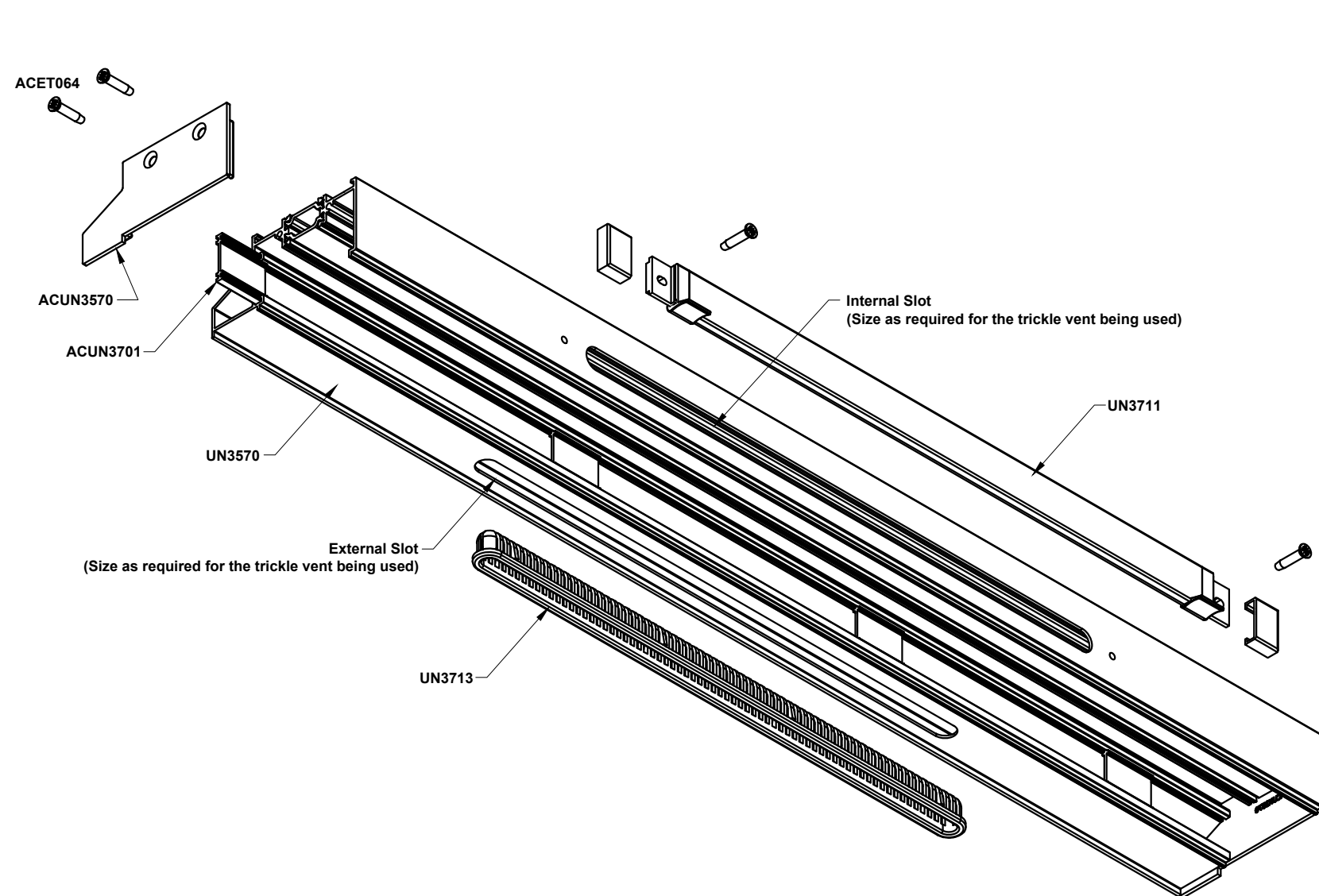


NOTE:

Fixing straps should be spaced a minimum of 150mm in from each end & at a maximum of 300mm apart.

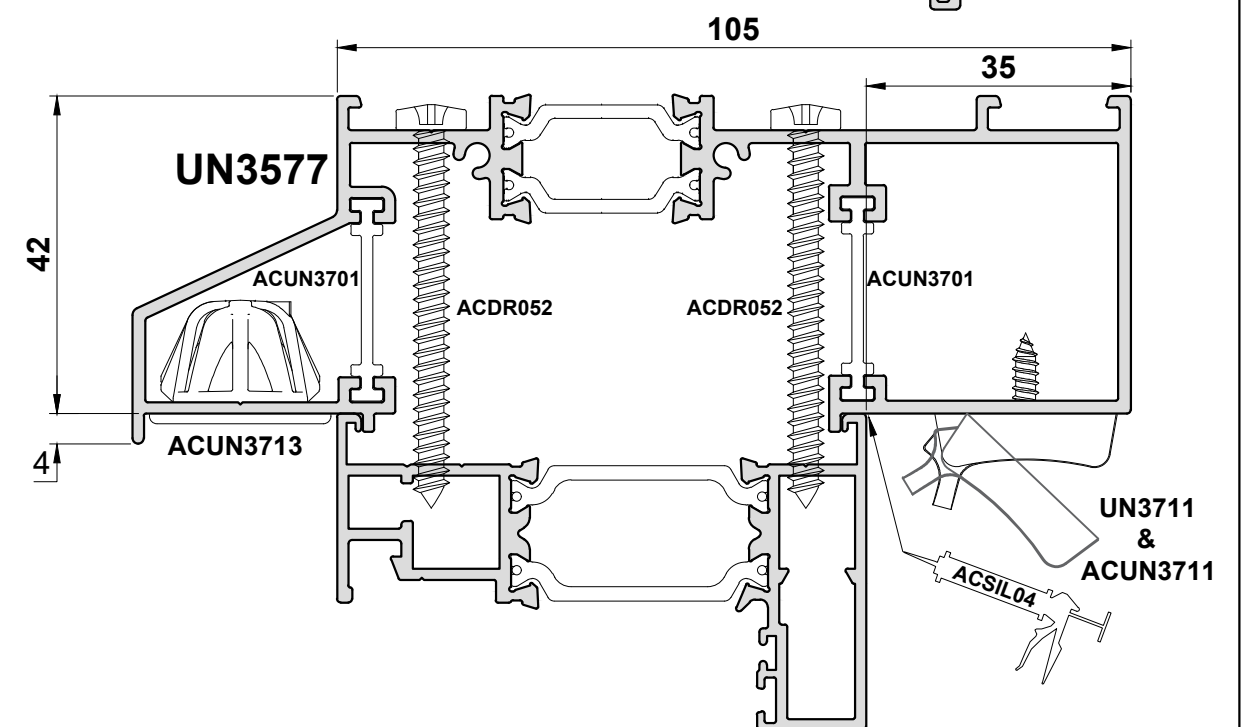
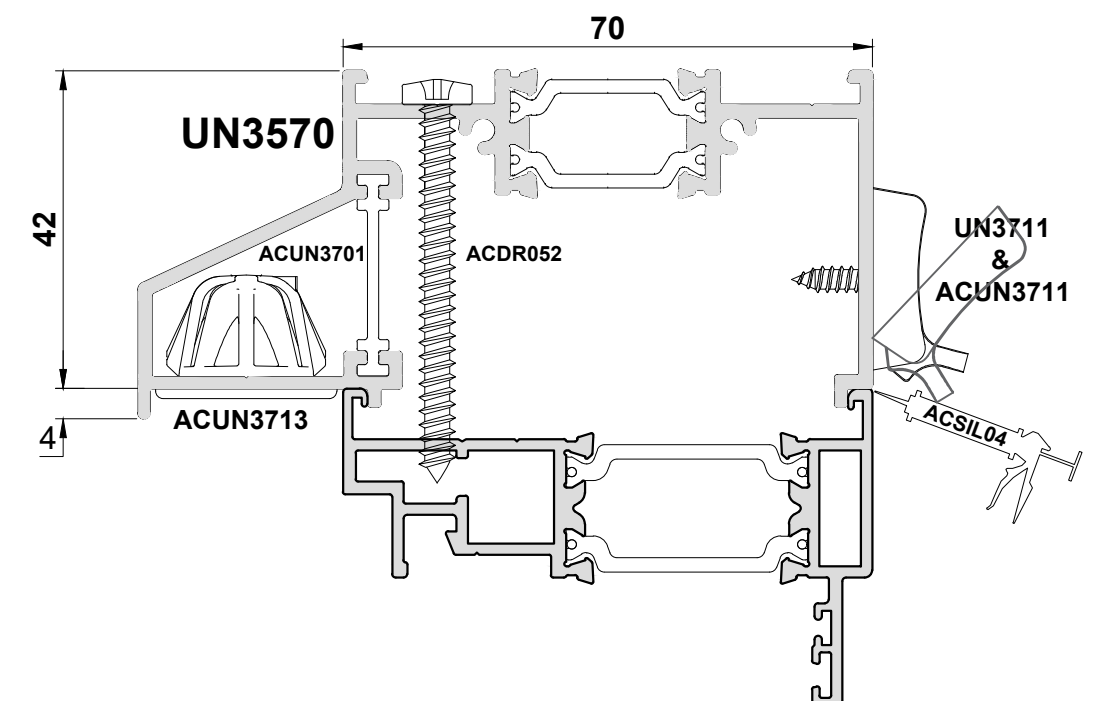


UN3570 & UN3577



UN3711 with Push in Flyscreen
Equivalent area as per BS 13141-1:2019 = 3026mm²
Length = 400mm
Internal Slot Size = 340mm X 13mm
External Slot Size = 235mm X 16mm

UN3711 with Push in Flyscreen
Equivalent area as per BS 13141-1:2019 = 6132mm²
Length = 600mm
Internal Slot Size = 2 X (275mm X 13mm) + (10mm land)
External Slot Size = 2 X (235mm X 16mm) + (10mm land)



Section F



Sawing Tables

..... F03 - F11

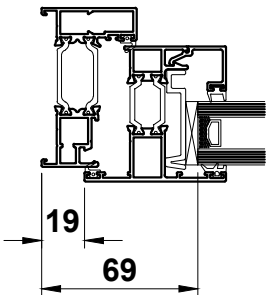
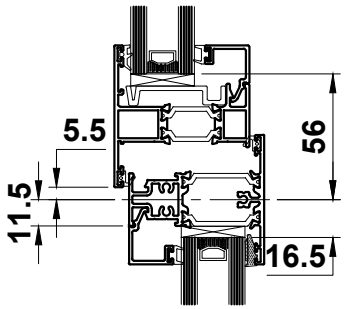
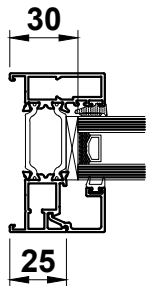
Section F

Cutting Information

PART DESCRIPTIONS		TYPICAL STYLES															
Outer Frame	Head & Cill		W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms			W - 50		W - 50	W - 50	W - 50	OF to €M - 36.5	W - 50		OF to €M - 36.5	€M to €M - 23	W - 50	OF to €M - 36.5	W - 50	
	Mullions								H - 50	H - 50	OF to €T - 36.5	H - 50	H - 50	H - 50	OF to €T - 36.5	H - 50	
Vent (1)	Horizontal Members				W - 38	W - 38	W - 38	W - 38	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	W - 38
	Vertical Members				H - 38	OF to €T - 24.5	OF to €T - 24.5	€T to €T - 11	H - 38	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5
	Glass Width				W - 138	W - 138	W - 138	W - 138	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	W - 138
	Glass Height				W - 138	OF to €T - 124.5	OF to €T - 124.5	€T to €T - 111	H - 138	H - 138	OF to €T - 124.5	H - 138	OF to €T - 124.5	H - 138	OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5
Vent (2)	Horizontal Members						W - 38		OF to €M - 24.5			OF to €M - 24.5	€M to €M - 11	€M to €M - 11	OF to €M - 24.5		
	Vertical Members						OF to €T - 24.5		OF to €T - 24.5			OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	
	Glass Width						W-138		OF to €M - 124.5			OF to €M - 124.5	€M to €M - 111	€M to €M - 111	OF to €M - 124.5		
	Glass Height						OF to €T - 124.5		OF to €T - 124.5			OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5	
Fixed Pane (1)	Glass Width		W - 60	W - 60		W - 60		W - 60	OF to €M - 46.5	OF to €M - 46.5	W - 60	€M to €M - 33	€M to €M - 33	€M to €M - 33	W - 60	OF to €M - 46.5	W - 60
	Glass Height		H - 60	OF to €T - 46.5		OF to €T - 46.5		OF to €T - 46.5	H - 60	OF to €T - 46.5	OF to €T - 46.5	H - 60	H - 60	OF to €T - 46.5	OF to €T - 46.5	H - 60	OF to €T - 46.5

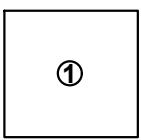
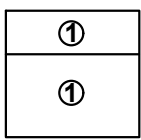
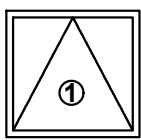
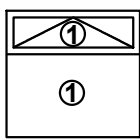
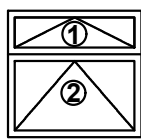
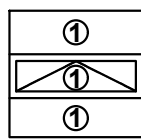
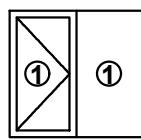
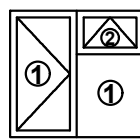
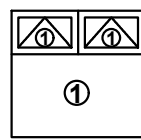
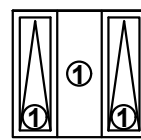
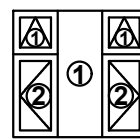
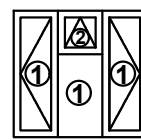
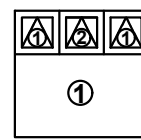
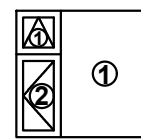
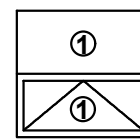
Legend
W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
€T = Centre Line of Transom
€M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

Sections
Outer Frame: ETC4110, ETC4112
Sash: ETC4129
Fixed Light: Beaded
Transom/Mullion: ETC4130



Do Not Scale From This Drawing

Cutting Information

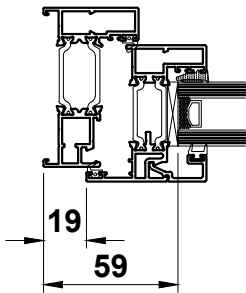
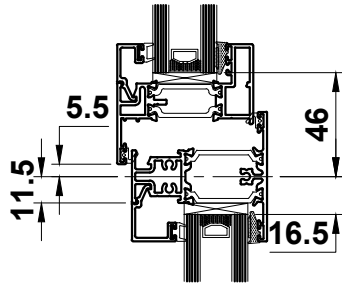
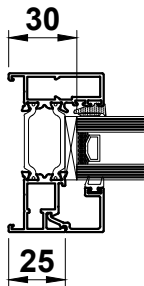
PART DESCRIPTIONS		TYPICAL STYLES															
Outer Frame	Head & Cill	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms		W - 50		W - 50	W - 50	W - 50		OF to €M - 36.5	W - 50		OF to €M - 36.5	€M to €M - 23	W - 50	OF to €M - 36.5	W - 50	
	Mullions							H - 50	H - 50	OF to €T - 36.5	H - 50	H - 50	H - 50	OF to €T - 36.5	H - 50		
Vent (1)	Horizontal Members			W - 38	W - 38	W - 38	W - 38	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	W - 38
	Vertical Members			H - 38	OF to €T - 24.5	OF to €T - 24.5	€T to €T - 11	H - 38	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5
	Glass Width			W - 118	W - 118	W - 118	W - 118	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	W - 118
	Glass Height			H - 118	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	H - 118	H - 118	OF to €T - 104.5	H - 118	OF to €T - 104.5	H - 118	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5
Vent (2)	Horizontal Members					W - 38			OF to €M - 24.5			OF to €M - 24.5	€M to €M - 11	€M to €M - 11	OF to €M - 24.5		
	Vertical Members					OF to €T - 24.5			OF to €T - 24.5			OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	
	Glass Width					OF to €M - 104.5			OF to €M - 104.5			OF to €M - 104.5	€M to €M - 91	€M to €M - 91	OF to €M - 104.5		
	Glass Height					OF to €T - 104.5			OF to €T - 104.5			OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	
Fixed Pane (1)	Glass Width	W - 60	W - 60		W - 60		W - 60	OF to €M - 46.5	OF to €M - 46.5	W - 60	€M to €M - 33	€M to €M - 33	€M to €M - 33	W - 60	OF to €M - 46.5	W - 60	
	Glass Height	H - 60	OF to €T - 46.5		OF to €T - 46.5		OF to €T - 46.5	H - 60	OF to €T - 46.5	OF to €T - 46.5	H - 60	H - 60	OF to €T - 46.5	OF to €T - 46.5	H - 60	OF to €T - 46.5	

Legend

W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
€T = Centre Line of Transom
€M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

Sections

Outer Frame: ETC4110, ETC4112
Sash: ETC4120
Fixed Light: Beaded
Transom/Mullion: ETC4130



Do Not Scale From This Drawing

Cutting Information

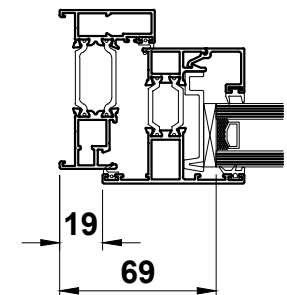
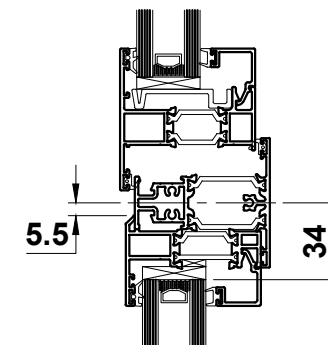
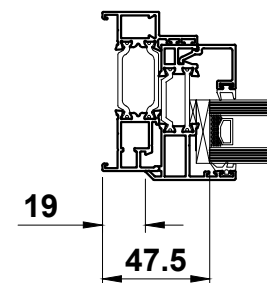
PART DESCRIPTIONS		TYPICAL STYLES														
Outer Frame	Head & Cill	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms		W - 50		W - 50	W - 50	W - 50		OF to €M - 36.5	W - 50		OF to €M - 36.5	€M to €M - 23	W - 50	OF to €M - 36.5	W - 50
	Mullions							H - 50	H - 50	OF to €T - 36.5	H - 50	H - 50	H - 50	OF to €T - 36.5	H - 50	
Vent (1)	Horizontal Members			W - 38	W - 38	W - 38	W - 38	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	W - 38
	Vertical Members			H - 38	OF to €T - 24.5	OF to €T - 24.5	€T to €T - 11	H - 38	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5
	Glass Width			W - 138	W - 138	W - 138	W - 138	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	OF to €M - 124.5	W - 138
	Glass Height			W - 138	OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5	H - 138	H - 138	OF to €T - 124.5	H - 138	OF to €T - 124.5	H - 138	OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5
Vent (2)	Horizontal Members					W - 38		OF to €M - 24.5	OF to €M - 24.5			OF to €M - 24.5	€M to €M - 11	€M to €M - 11	OF to €M - 24.5	
	Vertical Members					OF to €T - 24.5		OF to €T - 24.5	OF to €T - 24.5			OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	
	Glass Width					W - 138		OF to €M - 124.5	OF to €M - 124.5			OF to €M - 124.5	€M to €M - 111	€M to €M - 111	OF to €M - 124.5	
	Glass Height					OF to €T - 124.5		OF to €T - 124.5	OF to €T - 124.5			OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5	OF to €T - 124.5	
Fixed Pane (1)	Horizontal Members	W - 38	W - 38		W - 38		W - 38	OF to €M - 24.5	OF to €M - 24.5	W - 38	€M to €M - 11	€M to €M - 11	€M to €M - 11	W - 38	€M to €M - 24.5	W - 38
	Vertical Members	H - 38	OF to €T - 24.5		OF to €T - 24.5		OF to €T - 24.5	H - 38	OF to €T - 24.5	OF to €T - 24.5	H - 38	H - 38	OF to €T - 24.5	OF to €T - 24.5	H - 38	OF to €T - 24.5
	Glass Width	W - 95	W - 95		W - 95		W - 95	OF to €M - 81.5	OF to €M - 81.5	W - 95	€M to €M - 68	€M to €M - 68	€M to €M - 68	W - 95	OF to €M - 81.5	W - 95
	Glass Height	H - 95	OF to €T - 81.5		OF to €T - 81.5		OF to €T - 81.5	H - 95	OF to €T - 81.5	OF to €T - 81.5	H - 95	H - 95	OF to €T - 81.5	OF to €T - 81.5	H - 95	OF to €T - 81.5

Legend

W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
€T = Centre Line of Transom
€M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

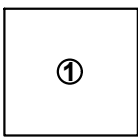
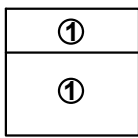
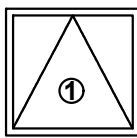
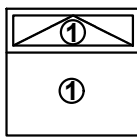
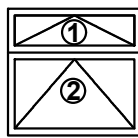
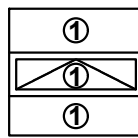
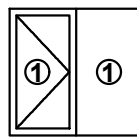
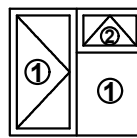
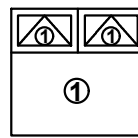
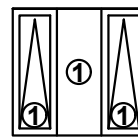
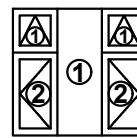
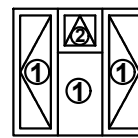
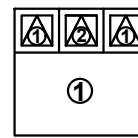
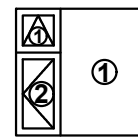
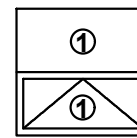
Sections

Outer Frame: ETC4110, ETC4112
Sash: ETC4129
Fixed Light: ETC4147
Transom/Mullion: ETC4130



Do Not Scale From This Drawing

Cutting Information

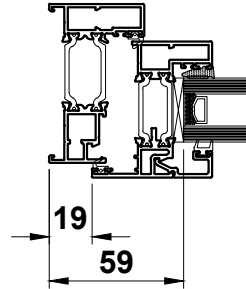
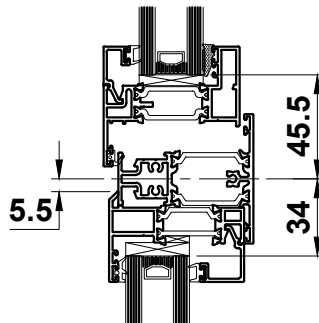
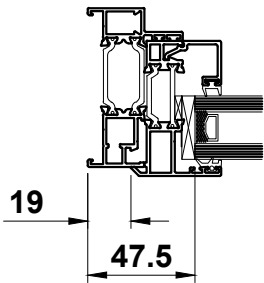
PART DESCRIPTIONS		TYPICAL STYLES															
Outer Frame	Head & Cill	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms		W - 50		W - 50	W - 50	W - 50		OF to €M - 36.5	W - 50		OF to €M - 36.5	€M to €M - 23	W - 50	OF to €M - 36.5	W - 50	
	Mullions							H - 50	H - 50	OF to €T - 36.5	H - 50	H - 50	H - 50	OF to €T - 36.5	H - 50		
Vent (1)	Horizontal Members			W - 38	W - 38	W - 38	W - 38	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	OF to €M - 24.5	W - 38
	Vertical Members			H - 38	OF to €T - 24.5	OF to €T - 24.5	€T to €T - 11	H - 38	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	H - 38	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5
	Glass Width			W - 118	W - 118	W - 118	W - 118	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	OF to €M - 104.5	W - 118
	Glass Height			H - 118	OF to €T - 104.5	OF to €T - 104.5	€T to €T - 93	H - 118	H - 118	OF to €T - 104.5	H - 118	OF to €T - 104.5	H - 118	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5
Vent (2)	Horizontal Members					W - 38			OF to €M - 24.5			OF to €M - 24.5	€M to €M - 11	€M to €M - 11	OF to €M - 24.5		
	Vertical Members					OF to €T - 24.5			OF to €T - 24.5			OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	OF to €T - 24.5	
	Glass Width					W - 118			OF to €M - 104.5			OF to €M - 104.5	€M to €M - 91	€M to €M - 91	€M to €M - 104.5		
	Glass Height					OF to €T - 104.5			OF to €T - 104.5			OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	OF to €T - 104.5	
Fixed Pane (1)	Horizontal Members	W - 38	W - 38		W - 38		W - 38	OF to €M - 24.5	OF to €M - 24.5	W - 38	€M to €M - 11	€M to €M - 11	€M to €M - 11	W - 38	€M to €M - 24.5	W - 38	
	Vertical Members	H - 38	OF to €T - 24.5		OF to €T - 24.5		OF to €T - 24.5	H - 38	OF to €T - 24.5	OF to €T - 24.5	H - 38	H - 38	OF to €T - 24.5	OF to €T - 24.5	H - 38	OF to €T - 24.5	
	Glass Width	W - 95	W - 95		W - 95		W - 95	OF to €M - 81.5	OF to €M - 81.5	W - 95	€M to €M - 68	€M to €M - 68	€M to €M - 68	W - 95	OF to €M - 81.5	W - 95	
	Glass Height	H - 95	OF to €T - 81.5		OF to €T - 81.5		OF to €T - 81.5	H - 95	OF to €T - 81.5	OF to €T - 81.5	H - 95	H - 95	OF to €T - 81.5	OF to €T - 81.5	H - 95	OF to €T - 81.5	

Legend

W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
€T = Centre Line of Transom
€M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

Sections

Outer Frame: ETC4110, ETC4112
Sash: ETC4120
Fixed Light: ETC4147
Transom/Mullion: ETC4130



Do Not Scale From This Drawing

Cutting Information

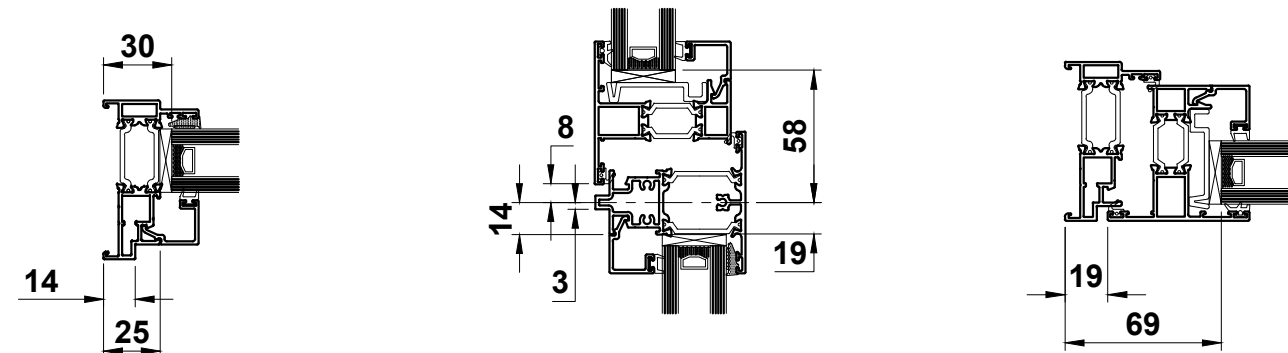
PART DESCRIPTIONS		TYPICAL STYLES															
Outer Frame	Head & Cill		W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms			W - 28		W - 28	W - 28	W - 28	OF to €M - 17	W - 28		OF to €M - 17	€M to €M - 6	W - 28	OF to €M - 17	W - 28	
	Mullions								H - 28	H - 28	OF to €T - 17	H - 28	H - 28	H - 28	OF to €T - 17	H - 28	
Vent (1)	Horizontal Members				W - 38	W - 38	W - 38	W - 38	OF to €M - 27	OF to €M - 27	OF to €M - 27	OF to €M - 27	OF to €M - 27	OF to €M - 27	OF to €M - 27	OF to €M - 27	W - 38
	Vertical Members				H - 38	OF to €T - 27	OF to €T - 27	€T to €T - 16	H - 38	H - 38	OF to €T - 27	H - 38	OF to €T - 27	H - 38	OF to €T - 27	OF to €T - 27	OF to €T - 27
	Glass Width				W - 138	W - 138	W - 138	W - 138	OF to €M - 127	OF to €M - 127	OF to €M - 127	OF to €M - 127	OF to €M - 127	OF to €M - 127	OF to €M - 127	OF to €M - 127	W - 138
	Glass Height				H - 138	OF to €T - 127	OF to €T - 127	OF to €T - 127	H - 138	H - 138	OF to €T - 127	H - 138	OF to €T - 127	H - 138	OF to €T - 127	OF to €T - 127	OF to €T - 127
Vent (2)	Horizontal Members						W - 38			OF to €M - 27			OF to €M - 27	€M to €M - 16	€M to €M - 16	OF to €M - 27	
	Vertical Members						OF to €T - 27			OF to €T - 27			OF to €T - 27	OF to €T - 27	OF to €T - 27	OF to €T - 27	
	Glass Width						W - 138			OF to €M - 127			OF to €M - 127	€M to €M - 116	€M to €M - 116	OF to €M - 127	
	Glass Height						OF to €T - 127			OF to €T - 127			OF to €T - 127	OF to €T - 127	OF to €T - 127	OF to €T - 127	
Fixed Pane (1)	Glass Width		W - 60	W - 60		W - 60		W - 60	OF to €M - 49	OF to €M - 49	W - 60	€M to €M - 38	€M to €M - 38	€M to €M - 38	W - 60	OF to €M - 49	W - 60
	Glass Height		H - 60	OF to €T - 49		OF to €T - 49		OF to €T - 49	H - 60	OF to €T - 49	OF to €T - 49	H - 60	H - 60	OF to €T - 49	OF to €T - 49	H - 60	OF to €T - 49

Legend

W	=	Outer Frame Width (Longest Leg)
H	=	Outer Frame Height (Longest Leg)
€T	=	Centre Line of Transom
€M	=	Centre Line of Mullion
OF	=	Edge of Outer Frame (Longest Leg)

Sections

Outer Frame:	ETC4115
Sash:	ETC4129
Fixed Light:	Beaded
Transom/Mullion:	ETC4135



Do Not Scale From This Drawing

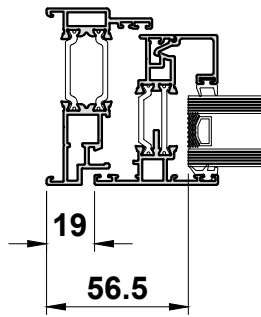
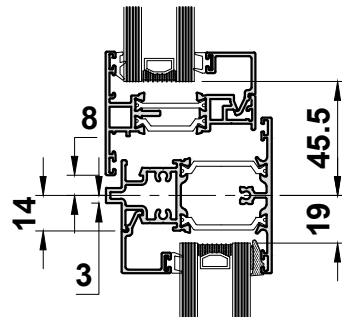
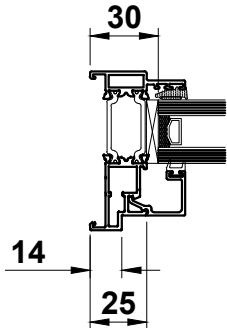
PART DESCRIPTIONS		TYPICAL STYLES														
Outer Frame	Head & Cill	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms		W - 28		W - 28	W - 28	W - 28		OF to ϵ M - 17	W - 28		OF to ϵ M - 17	ϵ M to ϵ M - 6	W - 28	OF to ϵ M - 17	W - 28
	Mullions							H - 28	H - 28	OF to ϵ T - 17	H - 28	H - 28	H - 28	OF to ϵ T - 17	H - 28	
Vent (1)	Horizontal Members			W - 38	W - 38	W - 38	W - 38	OF to ϵ M - 27	OF to ϵ M - 27	OF to ϵ M - 27	OF to ϵ M - 27	OF to ϵ M - 27	OF to ϵ M - 27	OF to ϵ M - 27	OF to ϵ M - 27	W - 38
	Vertical Members			H - 38	OF to ϵ T - 27	OF to ϵ T - 27	ϵ T to ϵ T - 16	H - 38	H - 38	OF to ϵ T - 27	H - 38	OF to ϵ T - 27	H - 38	OF to ϵ T - 27	OF to ϵ T - 27	OF to ϵ T - 27
	Glass Width			W - 113	W - 113	W - 113	W - 113	OF to ϵ M - 102	OF to ϵ M - 102	OF to ϵ M - 102	OF to ϵ M - 102	OF to ϵ M - 102	OF to ϵ M - 102	OF to ϵ M - 102	OF to ϵ M - 102	W - 113
	Glass Height			H - 113	OF to ϵ T - 102	OF to ϵ T - 102	OF to ϵ T - 102	H - 113	H - 113	OF to ϵ T - 102	H - 113	OF to ϵ T - 102	H - 113	OF to ϵ T - 102	OF to ϵ T - 102	OF to ϵ T - 102
Vent (2)	Horizontal Members					W - 38			OF to ϵ M - 27				OF to ϵ M - 27	ϵ M to ϵ M - 16	ϵ M to ϵ M - 16	OF to ϵ M - 27
	Vertical Members					OF to ϵ T - 27			OF to ϵ T - 27				OF to ϵ T - 27	OF to ϵ T - 27	OF to ϵ T - 27	OF to ϵ T - 27
	Glass Width					W - 113			OF to ϵ M - 102				OF to ϵ M - 102	ϵ M to ϵ M - 102	ϵ M to ϵ M - 102	OF to ϵ M - 102
	Glass Height					OF to ϵ T - 102			OF to ϵ T - 102				OF to ϵ T - 102	OF to ϵ T - 102	OF to ϵ T - 102	OF to ϵ T - 102
Fixed Pane (1)	Glass Width	W - 60	W - 60		W - 60		W - 60	OF to ϵ M - 49	OF to ϵ M - 49	W - 60	ϵ M to ϵ M - 38	ϵ M to ϵ M - 38	ϵ M to ϵ M - 38	W - 60	OF to ϵ M - 49	W - 60
	Glass Height	H - 60	OF to ϵ T - 49		OF to ϵ T - 49		OF to ϵ T - 49	H - 60	OF to ϵ T - 49	OF to ϵ T - 49	H - 60	H - 60	OF to ϵ T - 49	OF to ϵ T - 49	H - 60	OF to ϵ T - 49

Legend

W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
 ϵ T = Centre Line of Transom
 ϵ M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

Sections

Outer Frame: ETC4115
Sash: ETC4124
Fixed Light: Beaded
Transom/Mullion: ETC4135

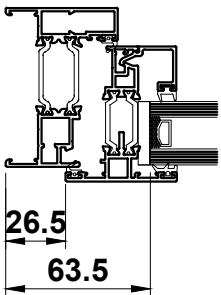
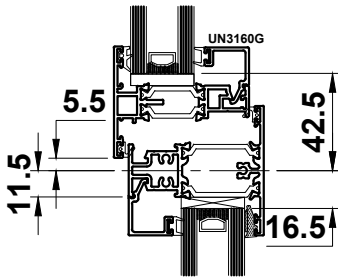
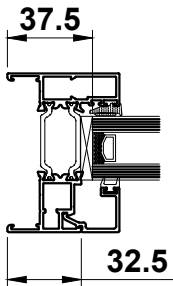


Do Not Scale From This Drawing

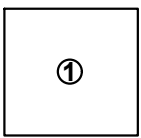
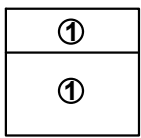
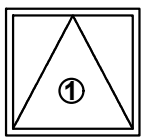
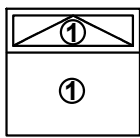
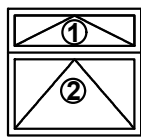
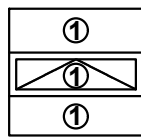
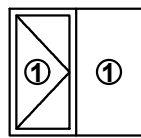
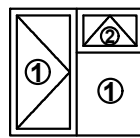
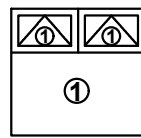
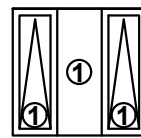
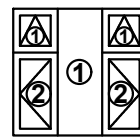
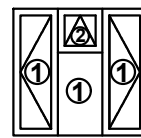
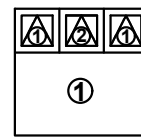
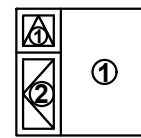
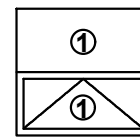
PART DESCRIPTIONS		TYPICAL STYLES														
Outer Frame	Head & Cill	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms		W - 65		W - 65	W - 65	W - 65		OF to €M - 44	W - 65		OF to €M - 44	€M to €M - 23	W - 65	OF to €M - 44	W - 65
	Mullions							H - 65	H - 65	OF to €T - 44	H - 65	H - 65	H - 65	OF to €T - 44	H - 65	
Vent (1)	Horizontal Members			W - 53	W - 53	W - 53	W - 53	OF to €M - 32	OF to €M - 32	OF to €M - 32	OF to €M - 32	OF to €M - 32	OF to €M - 32	OF to €M - 32	OF to €M - 32	W - 53
	Vertical Members			H - 53	OF to €T - 32	OF to €T - 32	€T to €T - 11	H - 53	H - 53	OF to €T - 32	H - 53	OF to €T - 32	H - 53	OF to €T - 32	OF to €T - 32	OF to €T - 32
	Glass Width			W - 127	W - 127	W - 127	W - 127	OF to €M - 106	OF to €M - 106	OF to €M - 106	OF to €M - 106	OF to €M - 106	OF to €M - 106	OF to €M - 106	OF to €M - 106	W - 127
	Glass Height			H - 127	OF to €T - 106	OF to €T - 106	OF to €T - 106	H - 127	H - 127	OF to €T - 106	H - 127	OF to €T - 106	H - 127	OF to €T - 106	OF to €T - 106	OF to €T - 106
Vent (2)	Horizontal Members					W - 53			OF to €M - 32			OF to €M - 32	€M to €M - 11	€M to €M - 11	OF to €M - 32	
	Vertical Members					OF to €T - 32			OF to €T - 32			OF to €T - 32	OF to €T - 32	OF to €T - 32	OF to €T - 32	
	Glass Width					W - 127			OF to €M - 106			OF to €M - 106	€M to €M - 86	€M to €M - 86	OF to €M - 106	
	Glass Height					OF to €T - 106			OF to €T - 106			OF to €T - 106	OF to €T - 106	OF to €T - 106	OF to €T - 106	
Fixed Pane (1)	Glass Width	W - 75	W - 75		W - 75		W - 75	OF to €M - 54	OF to €M - 54	W - 75	€M to €M - 33	€M to €M - 33	€M to €M - 33	W - 75	OF to €M - 54	W - 75
	Glass Height	H - 75	OF to €T - 54		OF to €T - 54		OF to €T - 54	H - 75	OF to €T - 54	OF to €T - 54	H - 75	H - 75	OF to €T - 54	OF to €T - 54	H - 75	OF to €T - 54

Legend
W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
€T = Centre Line of Transom
€M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

Sections
Outer Frame: ETC4111
Sash: ETC4124, ETC4125
Fixed Light: Beaded
Transom/Mullion: ETC4130



Do Not Scale From This Drawing

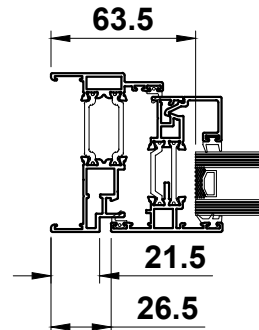
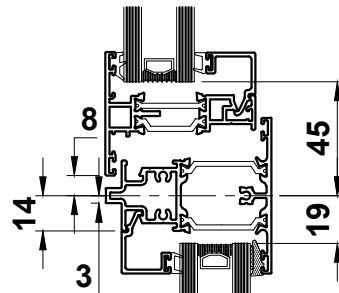
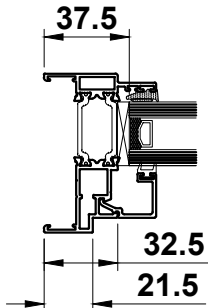
PART DESCRIPTIONS		TYPICAL STYLES															
Outer Frame	Head & Cill	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms		W - 43		W - 43	W - 43	W - 43		OF to €M - 24.5	W - 43		OF to €M - 24.5	€M to €M - 6	W - 43	OF to €M - 24.5	W - 43	
	Mullions							H - 43	H - 43	OF to €T - 24.5	H - 43	H - 43	H - 43	OF to €T - 24.5	H - 43		
Vent (1)	Horizontal Members			W - 53	W - 53	W - 53	W - 53	OF to €M - 34.5	OF to €M - 34.5	OF to €M - 34.5	OF to €M - 34.5	OF to €M - 34.5	OF to €M - 34.5	OF to €M - 34.5	OF to €M - 34.5	OF to €M - 34.5	W - 53
	Vertical Members			H - 53	OF to €T - 34.5	OF to €T - 34.5	€T to €T - 16	H - 53	H - 53	OF to €T - 34.5	H - 53	OF to €T - 34.5	H - 53	OF to €T - 34.5	OF to €T - 34.5	OF to €T - 34.5	OF to €T - 34.5
	Glass Width			W - 127	W - 127	W - 127	W - 127	OF to €M - 108.5	OF to €M - 108.5	OF to €M - 108.5	OF to €M - 108.5	OF to €M - 108.5	OF to €M - 108.5	OF to €M - 108.5	OF to €M - 108.5	OF to €M - 108.5	W - 127
	Glass Height			H - 127	OF to €T - 108.5	OF to €T - 108.5	OF to €T - 108.5	H - 127	H - 127	OF to €T - 108.5	H - 127	OF to €T - 108.5	H - 127	OF to €T - 108.5	OF to €T - 108.5	OF to €T - 108.5	OF to €T - 108.5
Vent (2)	Horizontal Members					W - 53			OF to €M - 34.5			OF to €M - 34.5	€M to €M - 16	€M to €M - 16	OF to €M - 34.5		
	Vertical Members					OF to €T - 34.5			OF to €T - 34.5			OF to €T - 34.5	OF to €T - 34.5	OF to €T - 34.5	OF to €T - 34.5	OF to €T - 34.5	
	Glass Width					W - 127			OF to €M - 108.5			OF to €M - 108.5	€M to €M - 91	€M to €M - 91	OF to €M - 108.5		
	Glass Height					OF to €T - 108.5			OF to €T - 108.5			OF to €T - 108.5	OF to €T - 108.5	OF to €T - 108.5	OF to €T - 108.5	OF to €T - 108.5	
Fixed Pane (1)	Glass Width	W - 75	W - 75		W - 75		W - 75	OF to €M - 56.5	OF to €M - 56.5	W - 75	€M to €M - 38	€M to €M - 38	€M to €M - 38	W - 75	OF to €M - 56.5	W - 75	
	Glass Height	H - 75	OF to €T - 56.5		OF to €T - 56.5		OF to €T - 56.5	H - 75	OF to €T - 56.5	OF to €T - 56.5	H - 75	H - 75	OF to €T - 56.5	OF to €T - 56.5	H - 75	OF to €T - 56.5	

Legend

W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
€T = Centre Line of Transom
€M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

Sections

Outer Frame: ETC4116
Sash: ETC4124, ETC4125
Fixed Light: Beaded
Transom/Mullion: ETC4135



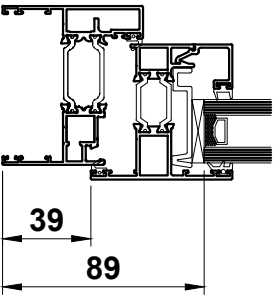
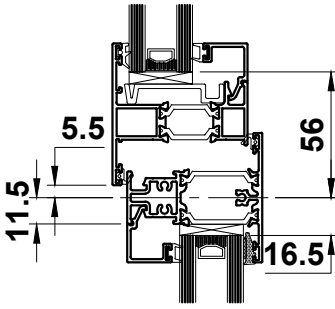
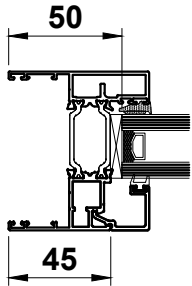
Do Not Scale From This Drawing

SAWING TABLES

PART DESCRIPTIONS		TYPICAL STYLES														
Outer Frame	Head & Cill	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	Jambs	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
	Transoms		W-90		W-90	W-90	W-90		O/F to CLM-56.5	W-90		O/F to CLM-56.5	CLMto CLM-23	W-90	O/F to CLM-56.5	W-90
	Mullions							H-90	H-90	O/F to CLT-56.5	H-90	H-90	H-90	O/F to CLT-39	H-90	
Vent (1)	Horizontal Members			W-78	W-78	W-78	W-78	O/F to CLM-44.5	O/F to CLM-44.5	O/F to CLM-44.5	O/F to CLM-44.5	O/F to CLM-44.5	O/F to CLM-44.5	O/F to CLT-44.5	O/F to CLM-44.5	W-78
	Vertical Members			H-78	O/F to CLT-44.5	O/F to CLT-44.5	CLT to CLT-11	H-78	H-78	O/F to CLT-44.5	H-78	O/F to CLT-44.5	H-78	O/F to CLT-44.5	O/F to CLT-44.5	O/F to CLT-44.5
	Glass Width					W-78			O/F to CLM-44.5			O/F to CLM-44.5	CLM to CLM-11	CLM to CLM-11	O/F to CLM-44.5	
	Glass Height					O/F to CLT-44.5			O/F to CLT-44.5			O/F to CLT-44.5	O/F to CLT-44.5	O/F to CLT-44.5	O/F to CLT-44.5	
Vent (2)	Horizontal Members			W-178	W-178	W-178	W-178	O/F to CLM-144.5	O/F to CLM-144.5	O/F to CLM-144.5	O/F to CLM-144.5	O/F to CLM-144.5	O/F to CLM-144.5	O/F to CLM-144.5	O/F to CLM-144.5	W-178
	Vertical Members			H-178	O/F to CLT-144.5	O/F to CLT-144.5	O/F to CLT-144.5	H-178	H-178	O/F to CLT-144.5	H-178	O/F to CLT-144.5	H-178	O/F to CLT-144.5	O/F to CLT-144.5	O/F to CLT-144.5
	Glass Width					W-178			O/F to CLM-144.5			O/F to CLM-144.5	CLM to CLM-111	CLM to CLM-111	CLM to CLM-111	
	Glass Height					O/F to CLT-144.5			O/F to CLT-144.5			O/F to CLT-144.5	O/F to CLT-144.5	O/F to CLT-144.5	O/F to CLT-144.5	
Fixed Pane (1)	Glass Width	W-100	W-100		W-100		W-100	O/F to CLM-66.5	O/F to CLM-66.5	W-100	CLM to CLM-33	CLM to CLM-33	CLM to CLM-33	W-100	O/F to CLM-66.5	W-100
	Glass Height	H-100	O/F to CLT-66.5		O/F to CLT-66.5		O/F to CLT-66.5	H-100	O/F to CLT-66.5	O/F to CLT-66.5	H-100	H-100	O/F to CLT-66.5	O/F to CLT-66.5	H-100	O/F to CLT-66.5

Legend
W = Outer Frame Width (Longest Leg)
H = Outer Frame Height (Longest Leg)
€T = Centre Line of Transom
€M = Centre Line of Mullion
OF = Edge of Outer Frame (Longest Leg)

Sections
Outer Frame: ETC4101
Sash: ETC4129
Fixed Light: Beaded
Transom/Mullion: ETC4130



Do Not Scale From This Drawing

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Do Not Scale From This Drawing
