

Main Index

SAO Index	Index.....	A01 - A02
A SAO	Profiles	
	Specification Pages.....	A03 - A06
	Technical Information.....	A07 - A08
	Scale Profile Drawings.....	A09 - A15
B SAO	Accessories	
	Photos & Drawings.....	B03 - B14
C SAO	Sections	
	Scale Elevations.....	C03 - C06
D SAO	Statics.....	D01 - D02
E SAO	Construction Drawings	
	SAO101 Machining Details.....	E03
	SAO101 Corner Assembly.....	E04
	Drainage.....	E05
	Optional Additional Drainage.....	E06
	Hip To Eaves.....	E07
	Crown Assembly.....	E08
	Rafter to Ridge - Ridge machining.....	E09
	Rafter to Ridge - Rafter machining.....	E10
	Rafter to Eaves Assembly.....	E11 - E12
	SAO109R Deductions = With Rafter.....	E13
	SAO109R Deductions = Without Rafter.....	E14
	Section Hole Centres Overview.....	E15
	Pyramid Crown Assembly.....	E16
F SAO	Sawing Tables	
	Cutting Information.....	F03 - F04

DATE	PAGE	DESCRIPTION
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Specification

GENERAL DESCRIPTION

The "Smart Lantern" roof system described in this manual is designed to offer a modern aluminium lantern roof with narrow sightlines and concealed fixings.

Smart Lantern has a fixed pitch of 25°.

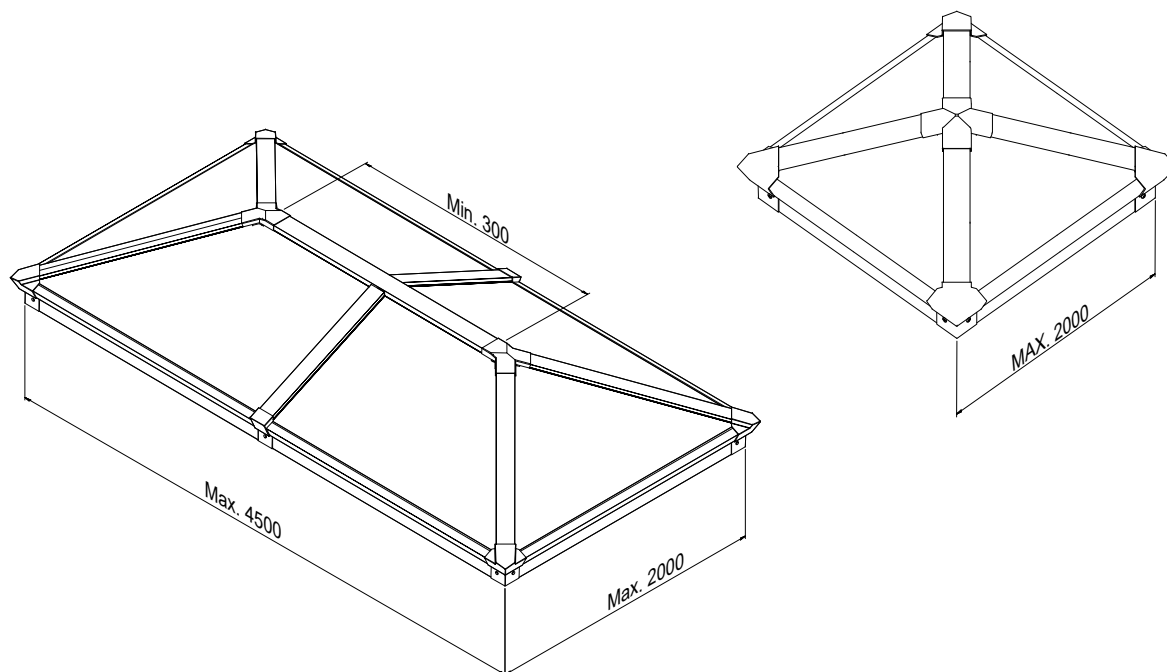
The system has been designed to make fabrication and site assembly a quick and simple process.

SIZE LIMITS

Max Width: 2000mm

Max Length: 4500mm where fitted to adequate structure.

Min Ridge Length: 300mm



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

Specification

PROFILE SPECIFICATION

The roof sections 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 of the eaves beam and glass stop 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

The roof is made by cutting the frame profiles with accurate 45° mitred ends or 90° square ends using Tungsten Carbide Tipped Saw Blades, operating at approximately 3000 rpm.

Eaves beam joints are formed with machine screws into extruded cleats through the mitred ends of the section.

Hip and rafter joints to the eaves beam are formed by fixing through the eaves beam into the relevant bracket with M5 machine screws.

Hip to ridge joints are formed by fixing each section to the crown bracket with machine screws. An additional clamp plate screw is also used at each joint for reinforcement.

Rafter to ridge joints are formed using an M5 rivnut into the side of the ridge to form a fixing for the bracket. The rafter is then fixed to the bracket using M5 machine screws.

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

DRAINAGE

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

EAVES BEAM MANUFACTURING INFORMATION

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

Corners are formed by either drilling, using drill jig ***, or punching, using punch tool ***, the corners ready for the cleat machine screws. Then, 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. The two mitred ends are then brought together and screwed. The small gap sealer ensures a permanent joint and guards against the ingress of moisture and joint movement. After screwing the corner joint, special care should be taken to ensure any excess sealer is removed from painted surfaces.

Smart Lantern U Values

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

Specification

GLAZING

All gasket to gasket joints shall be bonded using ACSIL05 rubber sealant.

Prior to placing the double glazed units into the openings, SAO109 shall be bonded to the bottom edge of the unit using ACUN3610. The unit is then placed in position at the ridge and lowered towards the eaves beam until SAO109 locates within SAO100 eaves beam

Units are secured in position at the crown with ACAO172, then SAO170, SAO172 & SAO175 cappings which are clipped into the isolators. Ensure cappings are not dented when clipping into position by using a rubber mallet taking care to strike the corners only to avoid denting the section.

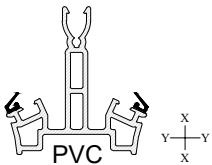
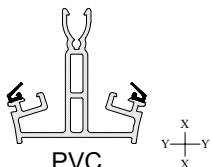
ACAO170 crown cover cap is sealed over the ridge & hips, and clips into ACAO172.

Hip end caps, ACAO183, and rafter end caps, ACAO181 are fixed in position into the SAO100 eaves beam using ACUN3563 self-tapping screws.

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
SAO101		A09	347	77	20.68 — 5.2	6.21 — 4.38	6.5	1	✓	✓	✓	✓	
SAO102		A09	203	40	3.95 — 0.85	0.85 — 0.61	6.5	1	✓	✓	✓	✓	
SAO109R		A10	386	149	- — -	- — -	6.5	1	✓	✓	✓	✓	
SAO120		A11	254	165	14.29 — 4.57	21.42 — 7.52	6.5	1	✓	✓	✓	✓	
SAO125		A11	267	177	17.52 — 5.12	22.79 — 8.00	6.5	1	✓	✓	✓	✓	
SAO170		A12	294	103	- — -	- — -	6.5	1	✓	✓	✓	✓	
SAO172		A12	268	79	- — -	- — -	6.5	1	✓	✓	✓	✓	
SAO175		A12	176	78	- — -	- — -	6.5	1	✓	✓	✓	✓	
SAO121G		A13	-	-	- — -	- — -	6.5	1	✓				
								A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

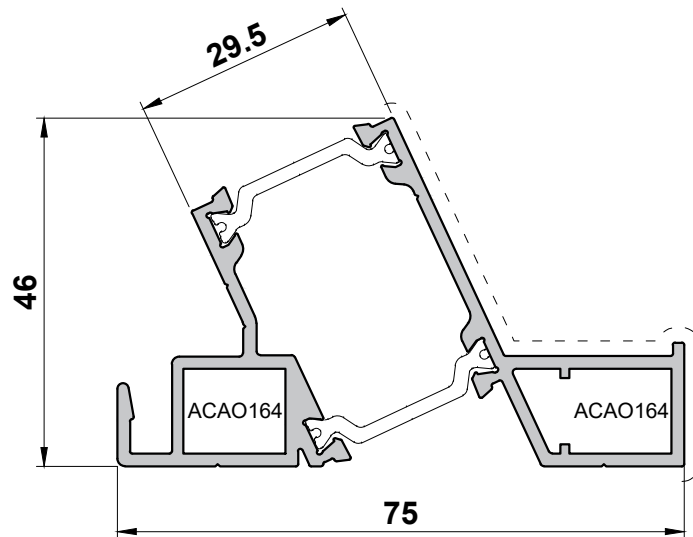
PROFILES : TECHNICAL INFORMATION

Number	Picture	Page	Perim. mm	Mec. mm	Ix(cm4) wx(cm3)	Iy(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M
SAO122G		A14	-	-	- -	- -	6.5	1	✓				
SAO123G		A15	-	-	- -	- -	6.5	1	✓				
								A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

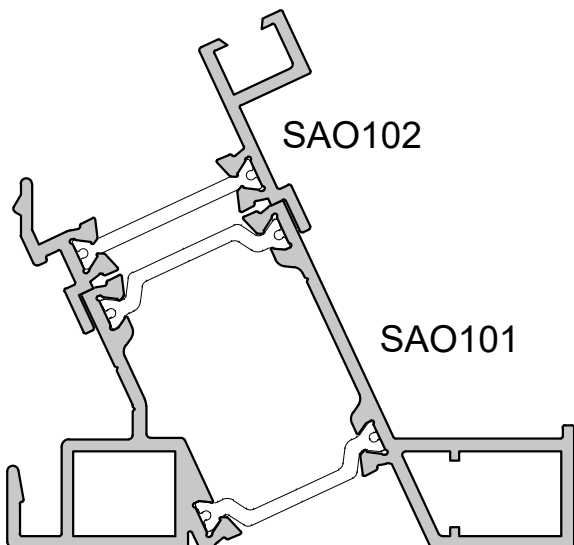
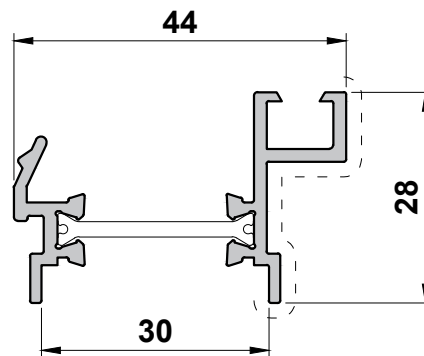
Primary Visible Side

Secondary Visible Side

SAO101
Eaves Beam



SAO102
Gasket Carrier



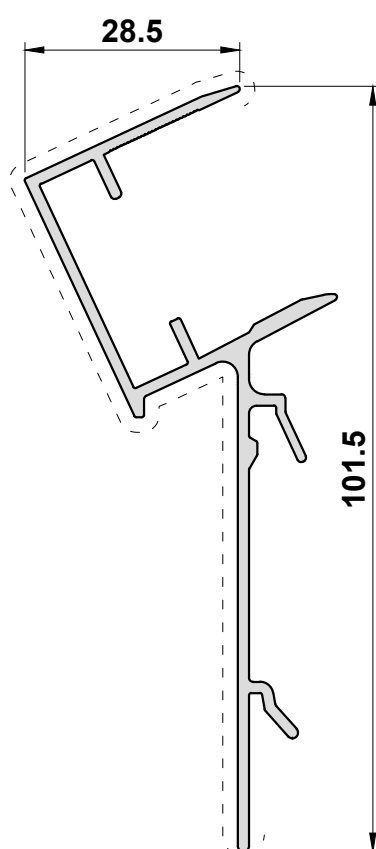
Scale 1:1

Primary Visible Side

Secondary Visible Side

SAO109R

Glass Stop



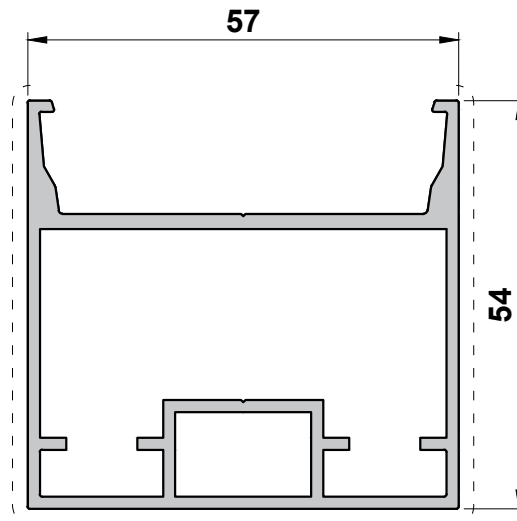
Scale 1:1

Primary Visible Side

Secondary Visible Side

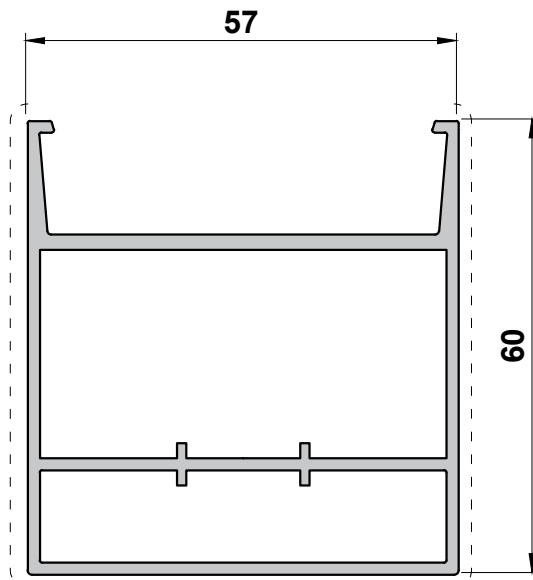
SAO120

Rafter



SAO125

Ridge & Hip

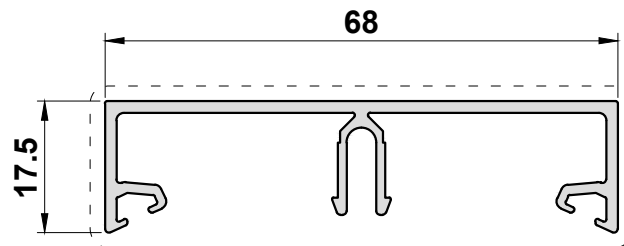


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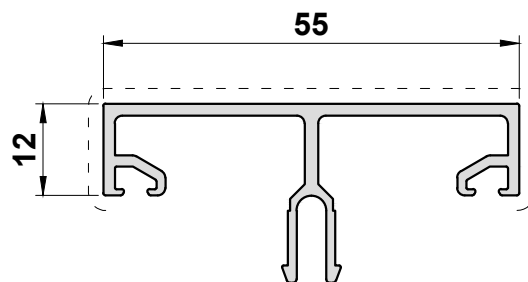
Primary Visible Side

Secondary Visible Side

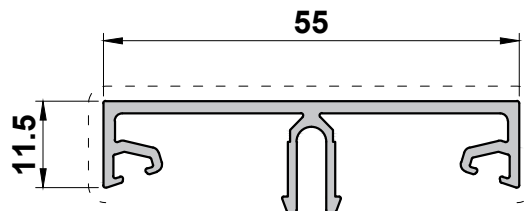
SAO170
Ridge Cap



SAO172
Rafter Cap



SAO175
Hip Cap

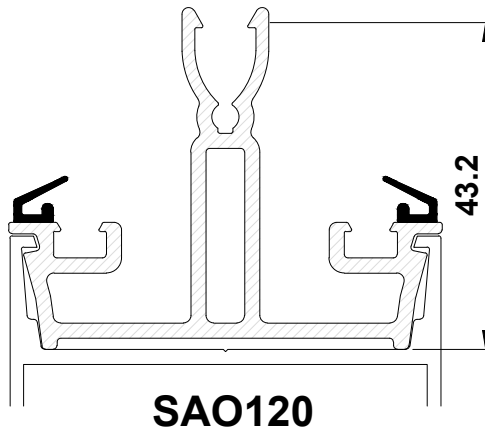


Scale 1:1

Primary Visible Side

Secondary Visible Side

SAO121G
PVC Rafter
Isolator

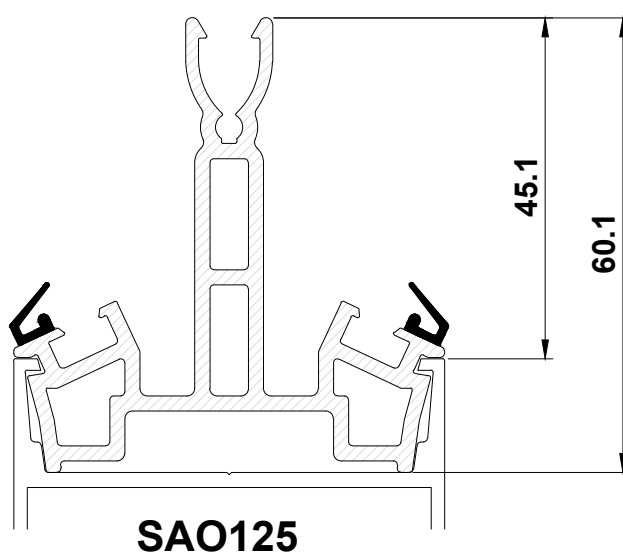


Scale 1:1

Primary Visible Side

Secondary Visible Side

SAO122G
PVC Ridge Isolator



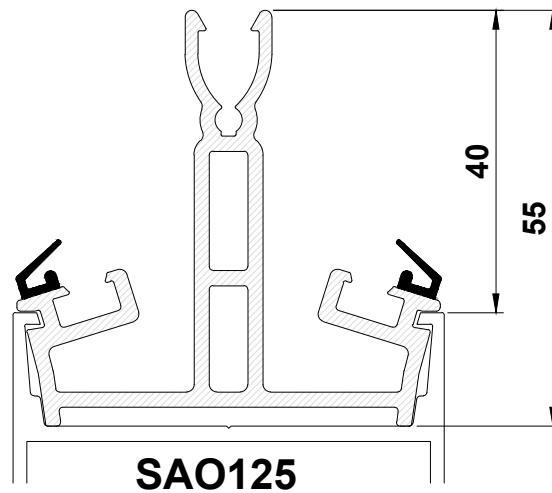
Scale 1:1

Primary Visible Side

Secondary Visible Side

SAO123G

Isolator
Hip



Scale 1:1

Primary Visible Side

Secondary Visible Side

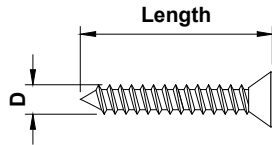
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Section B

Accessories

Photos & Drawings

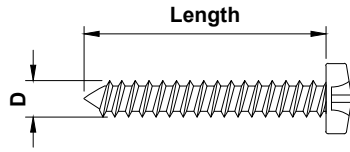
Countersunk Screws



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"	Countersunk Pozi Self Tapper S/S	100
MUA025SSZ	No.6	X	1"	Countersunk Pozi Self Tapper S/S	100
ACET067	No.7	X	1/2"	Countersunk Pozi Self Tapper S/S	100
ACET060	No.7	X	1"	Countersunk Pozi Self Tapper S/S	100
ACET066	No.7	X	1 1/2"	Countersunk Pozi Self Tapper S/S	100
MUA067SSZ	No.7	X	2"	Countersunk Pozi Self Tapper S/S	100
ACUN3544	No.7	X	3/4"	Countersunk Pozi Self Tapper S/S	100
ACET064	No.8	X	5/8"	Countersunk Pozi Self Tapper S/S	100
ACUN3512	No.8	X	1 1/4"	Countersunk Pozi Self Tapper S/S	100
ACUN3513	No.8	X	1 3/4"	Countersunk Pozi Self Tapper S/S	100
ACET072	No.8	X	2 1/2"	Countersunk Pozi Self Tapper S/S	100
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
ACET048	No.10	X	3/8"	Countersunk Pozi Self Tapper S/S	100
ACIM062	No.10	X	1 1/4"	Countersunk Pozi Self Tapper S/S	100
ACET062	No.10	X	2"	Countersunk Pozi Self Tapper S/S	100
ACET076	No.10	X	2 1/2"	Countersunk Pozi Self Tapper S/S	100

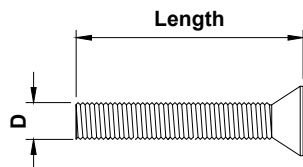
Pan Head Screws



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"	Pozi Flange AB	100
ACET063	No.8	X	1/2"	Pan Head Self Tapper	100
ACET070	No.8	X	1/2"	Pozi Flange Self Tapper S/S	100
ACUN3535	No.8	X	5/8"	Pan Head Pozi S/S	100
ACET099	No.8	X	3/4"	Pozi Flange Self Tapper S/S	100
ACDR050	4.8mm	X	32mm	Pan Head Pozi S/S	200
PUA028	No.10	X	1"	Pan Head Pozi S/S	100
ACDR052	No.10	X	2"	Pan Head Self Tapper S/S	200
ACET079	No.10	X	2 1/2"	Pan Head Pozi S/S	100
ACW20160	No.12	X	1"	Flange Head Self Tapper S/S	100
ACMC109	6.3mm	X	38mm	DIN7981 - Pan Head Self Tapper	200

Machine Screws

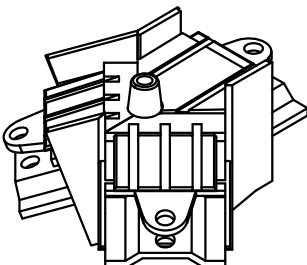
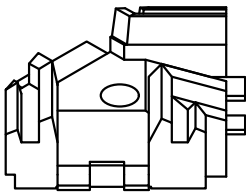
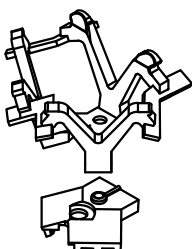
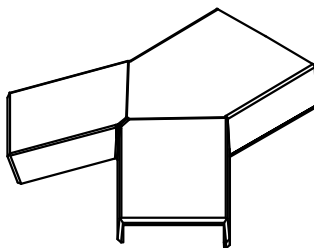
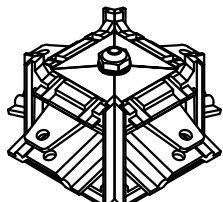
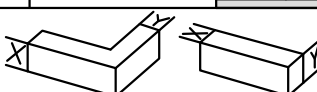


Thread	'D' (mm) Nominal
M4	4
M5	5
M6	6
M8	8
M10	10

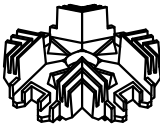
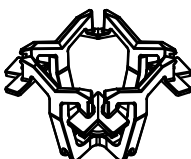
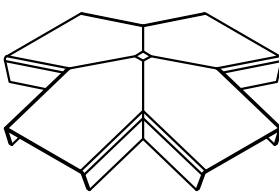
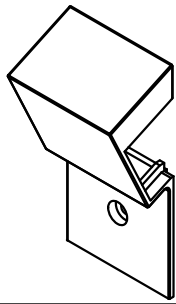
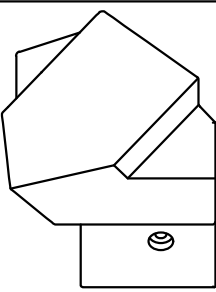
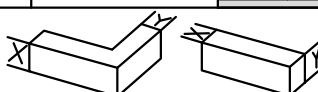
Part Number	Thread	X	Length	Description	Box Qty.
ACET122	M4	X	10	CSK Pozi Machine Screw	100
ACET123	M4	X	20	CSK Pozi Machine Screw	100
ACDV264	M4	X	35	CSK Pozi Machine Screw	100
ACSG071	M4	X	40	CSK Pozi Machine Screw	100
ACDV266	M4	X	45	CSK Pozi Machine Screw	100
ACDV262	M4	X	50	CSK Pozi Machine Screw	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

Image	Part Code	Pack		Application	Colour		
	ACAO150 Rafter to Ridge Bracket	1	each	SAO120 SAO125	MF	✓	
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z		
					PC		
	ACAO151 Rafter to Eaves Bracket	1	each	SAO120 SAO125	MF	✓	
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z		
					PC		
	ACAO154 Rafter to Ridge Capping Seal	1	each	SAO172	MF		
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z	✓	
					PC		
	ACAO161 Hip to Eaves Bracket	1	each	SAO125 SAO100	MF	✓	
					SA		
					KL		
					HP		
					SSC		
					SMC		
					W		
					Z		
					PC		
	ACAO164 SAO100 Corner Cleat 8 Cleats Per Pack	1	pack	SAO101	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		Application	Colour	
	ACA0170 Crown	1	each	SAO125 SAO125 ACA0171 ACA0172 ACA0173	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACA0171 Rubber Seal	1	each	ACA0170 ACA0172	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACA0172 Cap Carrier	1	each	ACA0170 ACA0171 ACA0173	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACA0173 Crown Cap	1	each	ACA0170 ACA0172 ACA0173	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACA0175 Pyramid Crown	1	each	ACA0176 ACA0177 ACA0178	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	
	ACAO176 Pyramid Crown Seal	1	each	ACAO175 ACAO177 ACAO178	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACAO177 Pyramid Crown Glass Clamp	1	each	ACAO175 ACAO176 ACAO178	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACAO178 Pyramid Crown Cap	1	each	ACAO175 ACAO176 ACAO177	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACAO181 Rafter End Cap	2	each	SAO109R SAO120	MF	✓
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACAO183 Hip End Cap	4	each	SAO109R SAO125	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

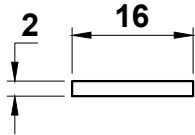
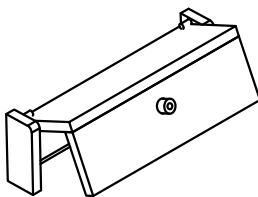
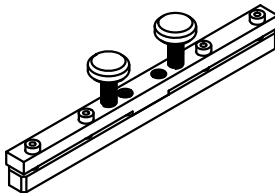
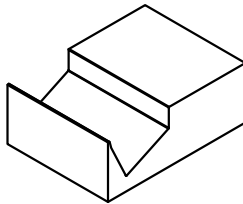
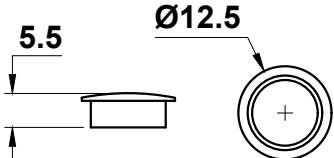
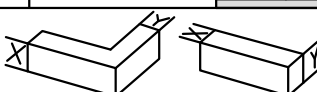
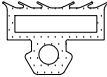
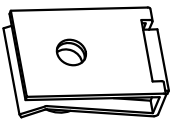
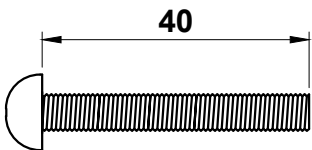
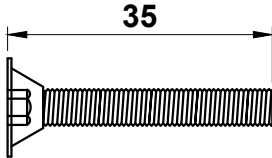
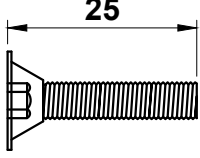
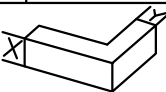
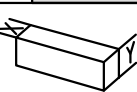
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	ACAO186 2mm x 16mm Single Sided Adhesive Black Foam Tape	20	m	SAO102	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACAO950 Drill Jig	1	each	SAO101 ACAO151 ACAO161	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACAO951 Cleat Drill Jig	1	each	SAO101 ACAO164	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACAO952 Contour Block	1	each	SAO109R	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACGSL1180 Screw Cover Caps WP = White BL = Black	100	pack	ACAO181 ACAO183	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				
 Screw (Grub)						

Image	Part Code	Pack	Unit	Application	Colour	
	ACMC017 Retaining Gasket	100	m	SAO102	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
	ACUN3560 M6 Lug Nut	100	pack	SAO100 SAO121 SAO122 SAO123	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3561 M6 x 40mm Button Head Bolt	100	pack	ACAO151 ACAO161 ACAO170	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3562 M6 x 35mm CSK Bolt	100	pack	ACAO150 ACAO151 ACAO161 ACAO170	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3563 M6 x 25mm CSK Bolt	100	pack	ACAO170 ACAO172	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

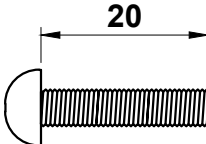
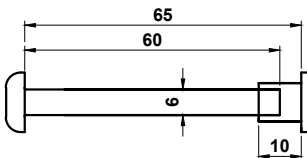
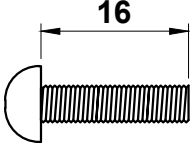
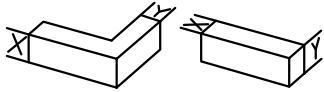
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	ACUN3564 M6 x 20mm Button Head Bolt	100	pack	ACAO170 ACAO172	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3565 M6 x 60mm Bolt with Connector	1	set	ACAO150 SAO125	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACUN3585 M6 x 16mm Button Head Bolt	100	pack		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACVR201 Retaining Gasket	100	m	SAO170 SAO172 SAO175	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
					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	

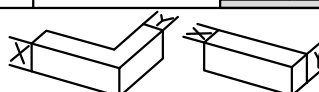
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	ACMX09700 Alu. Polish	1	each		MF	✓
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					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09761 Maxi Gloss	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					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	
 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			

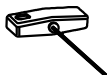
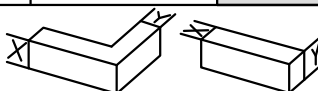
Image	Part Code	Pack	Unit	Application	Colour	
	ACMX09765 Alu. Cleaner	1	each		MF	
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					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09770 Roll & Wrap 100mm	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					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	
 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			

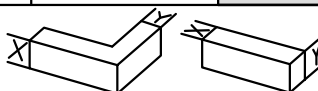
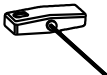
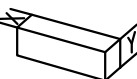
Image	Part Code	Pack	Unit	Application	Colour
	ACMX09803 Protective Tape 100mm	1	each		MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACMX09830 Rubber Sealant	1	each		MF
					SA
					KL
					HP
					SSC
					SMC
					W
					Z
					PC
	ACSIL04 Sealing Glue Order with suffix of KL colour (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
 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		

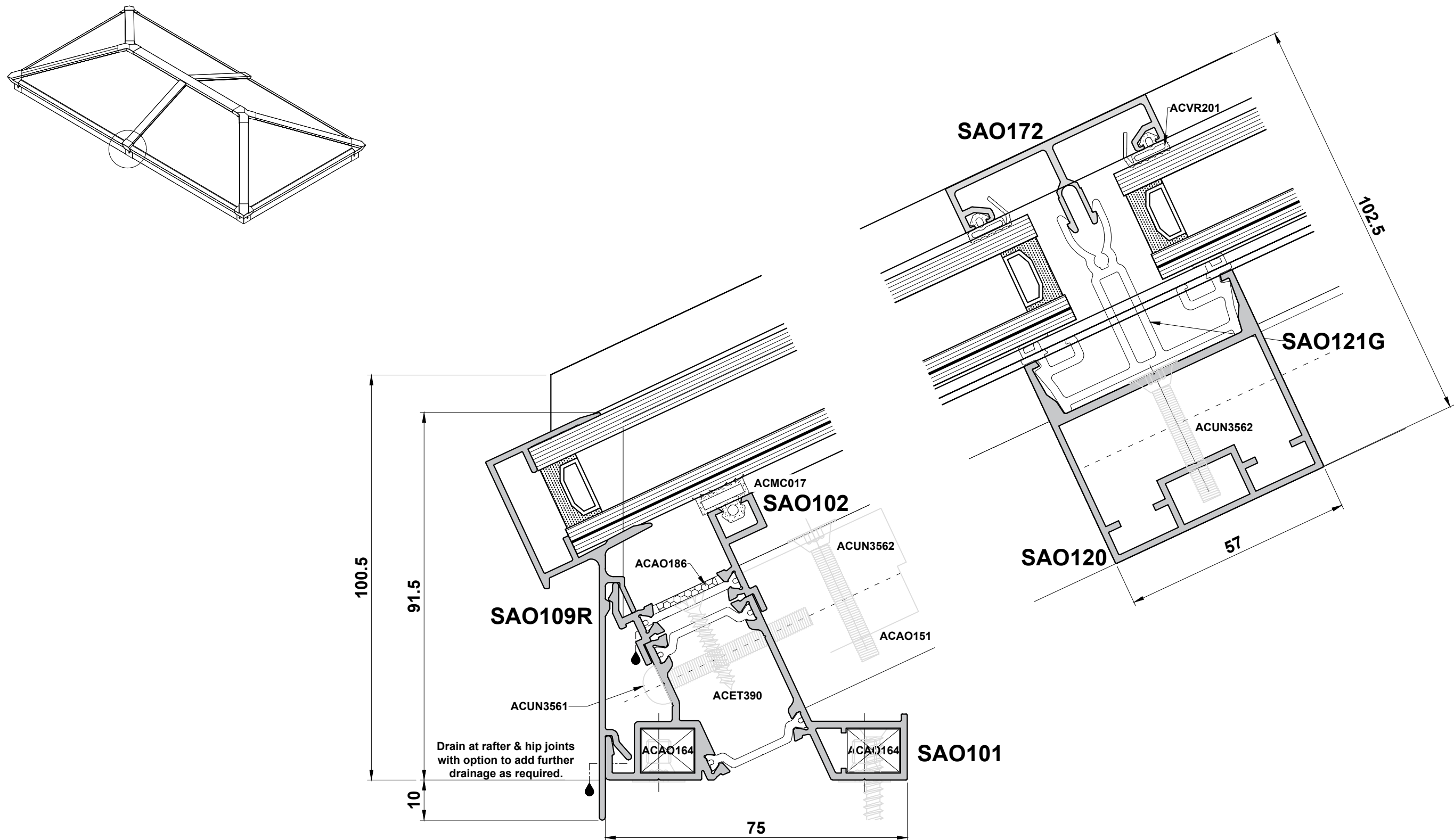
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	ACSIL014 Anti-Corrosion Coating	1	each		MF ☒
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
	ACUN3900 Gasket Roller	1	each		MF ☐
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
					MF ☐
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
					W ☐
					Z ☐
					PC ☐
					MF ☐
					SA ☐
					KL ☐
					HP ☐
					SSC ☐
					SMC ☐
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					Z ☐
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					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				 

Section C

Sections
Scale Elevations

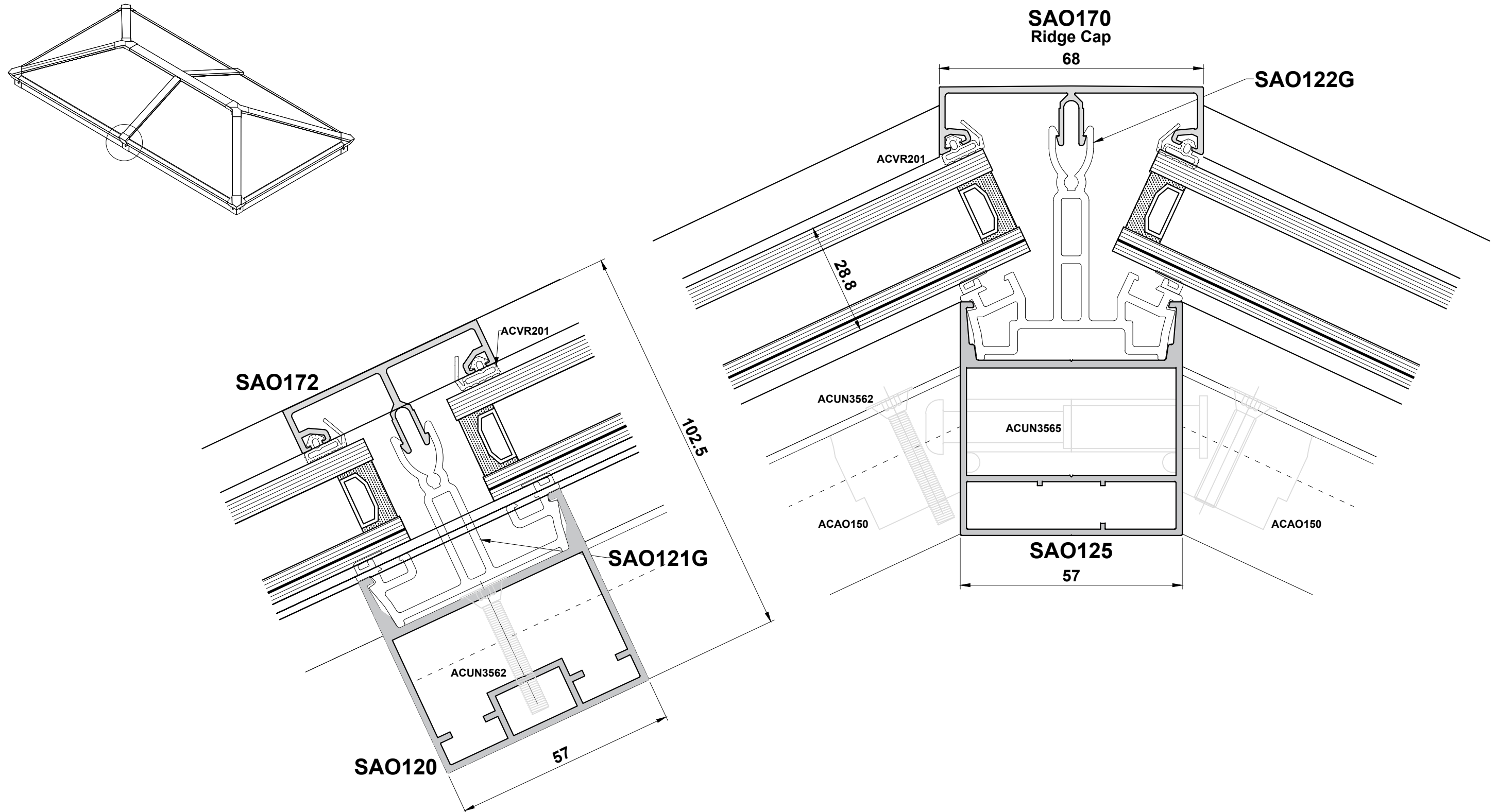


Detail 1A: Eaves



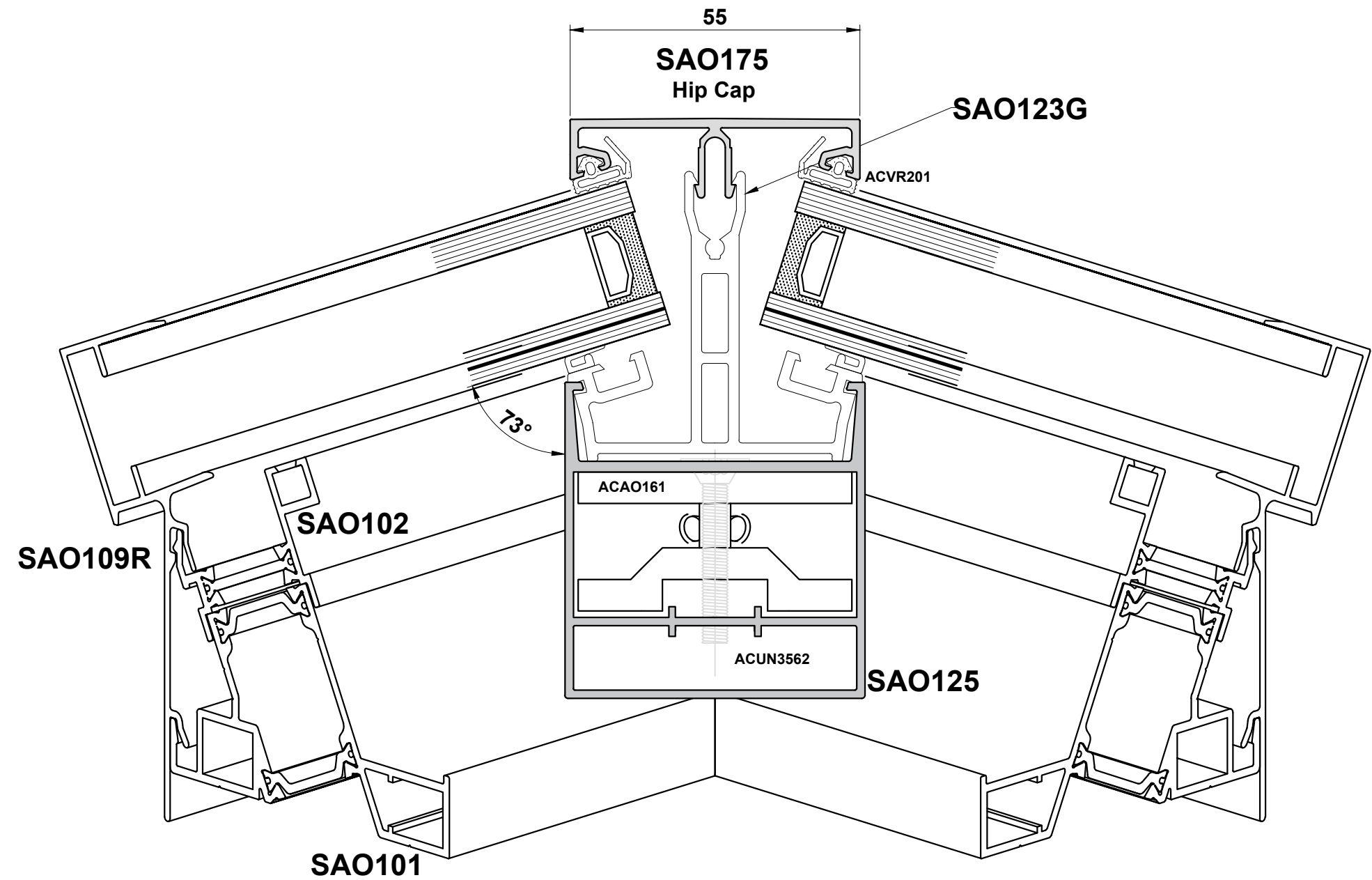
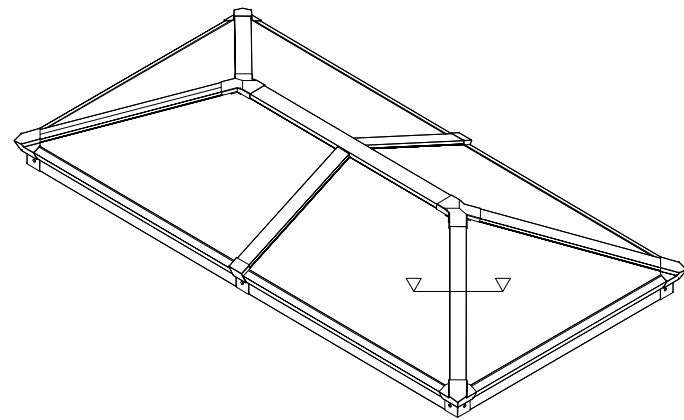
Do Not Scale From This Drawing

Detail 2: Ridge & Rafter



Do Not Scale From This Drawing

Detail 3: Hip



Do Not Scale From This Drawing

Do Not Scale From This Drawing

Section D

Statics

General Size Limitations are shown on Page A03.

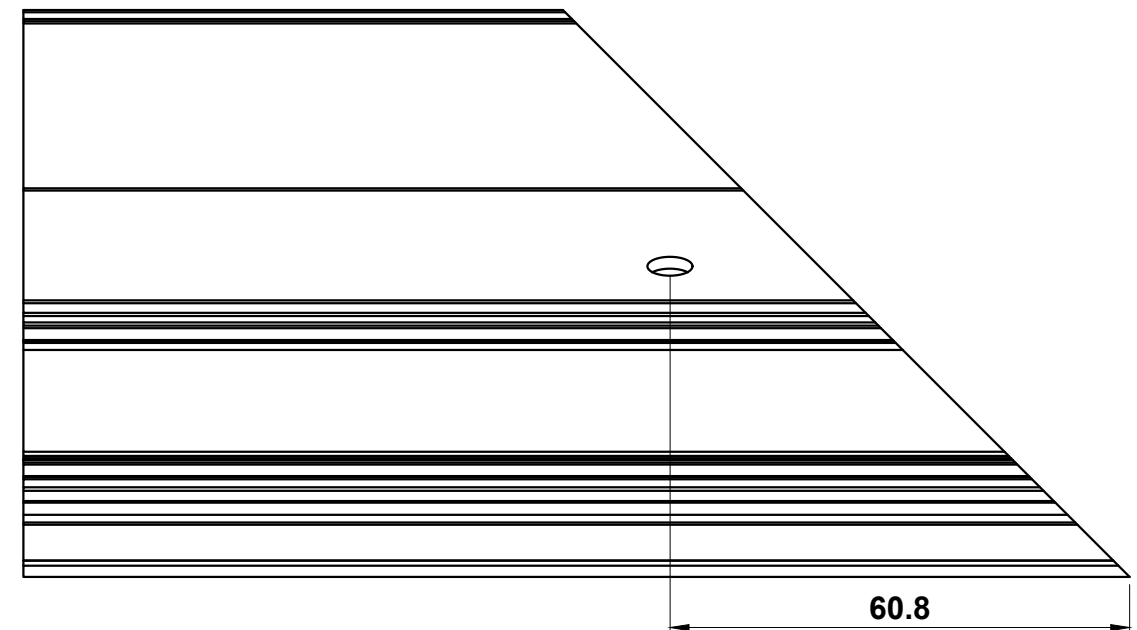
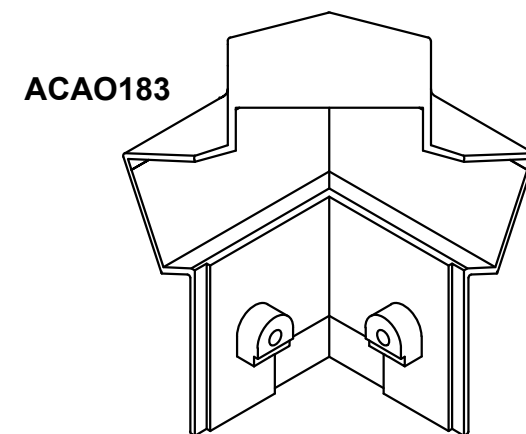
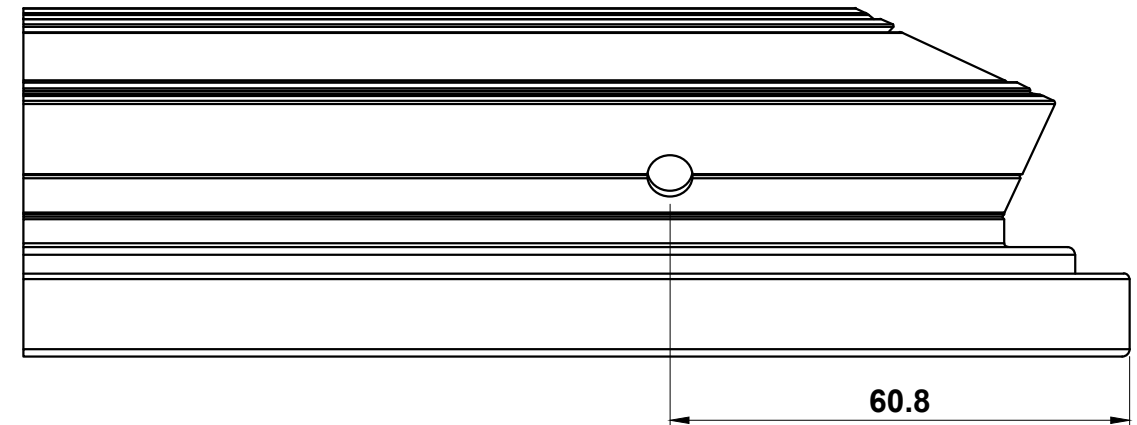
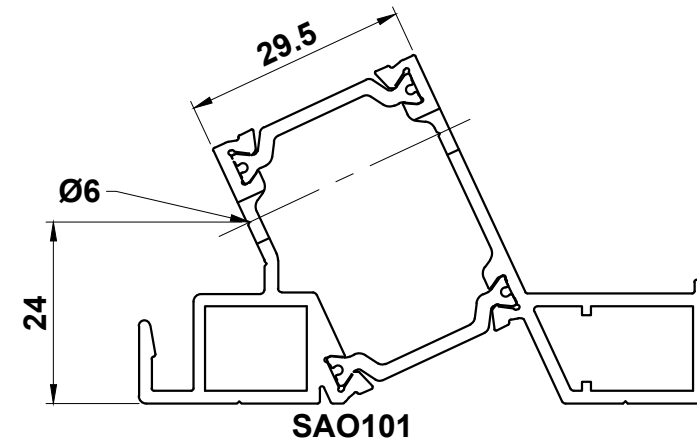
**For Limitations, Please Contact
The Technical Department - T: 01934 833100**

Section E

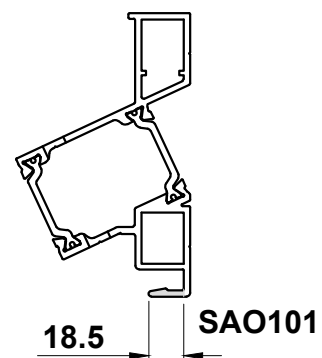
Construction Drawings

SAO101 Machining Details.....	E03
SAO101 Corner Assembly.....	E04
Drainage.....	E05
Optional Additional Drainage.....	E06
Hip To Eaves.....	E07
Crown Assembly.....	E08
Rafter to Ridge - Ridge machining.....	E09
Rafter to Ridge - Rafter machining.....	E10
Rafter to Eaves Assembly.....	E11 - E12
SAO109R Deductions = With Rafter.....	E13
SAO109R Deductions = Without Rafter.....	E14
Section Hole Centres Overview.....	E15
Pyramid Crown Assembly.....	E16

SAO101 Machining Details

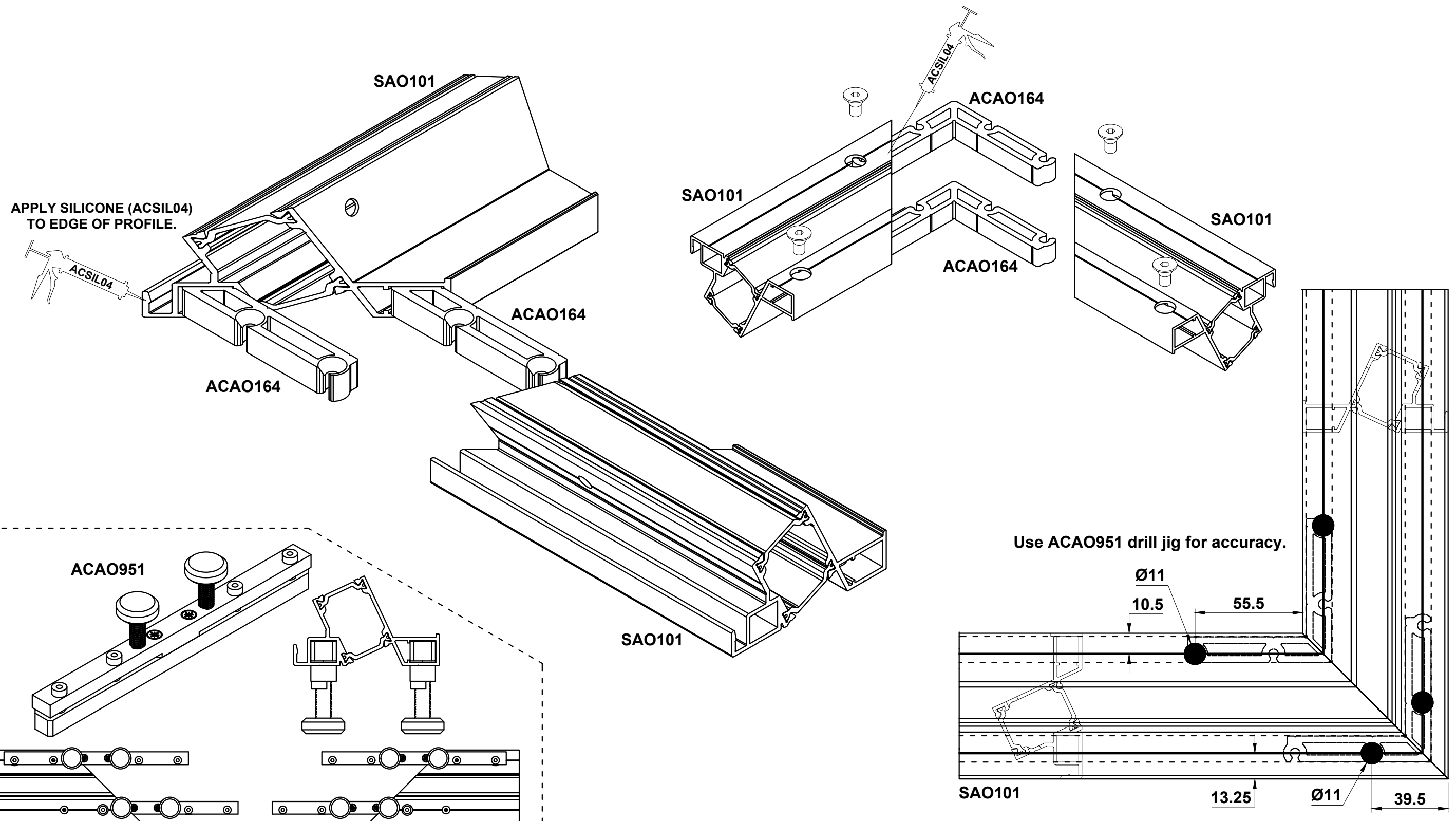


PLEASE NOTE: TO DRAIN SAO101, A NOTCH IS TO BE MADE AT EACH MITRED CORNER UNDER EACH RAFTER.



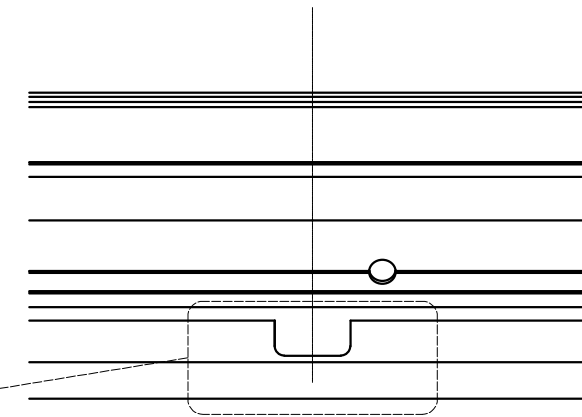
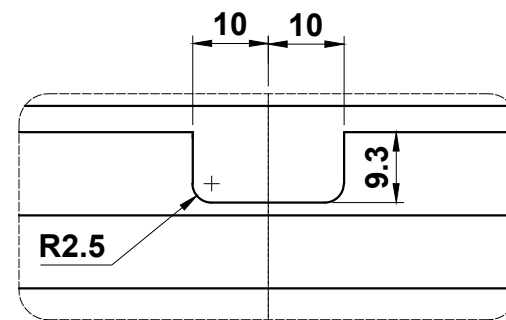
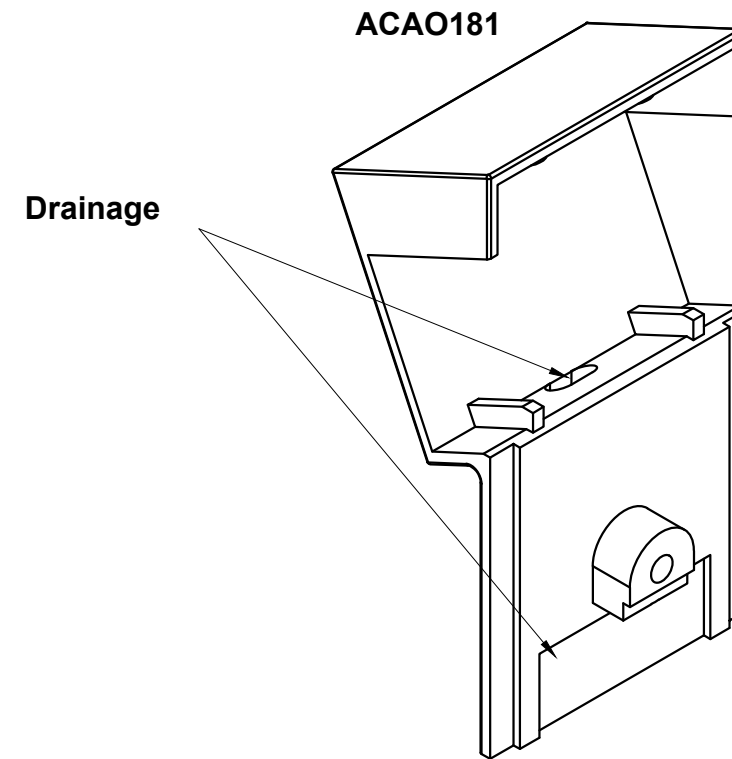
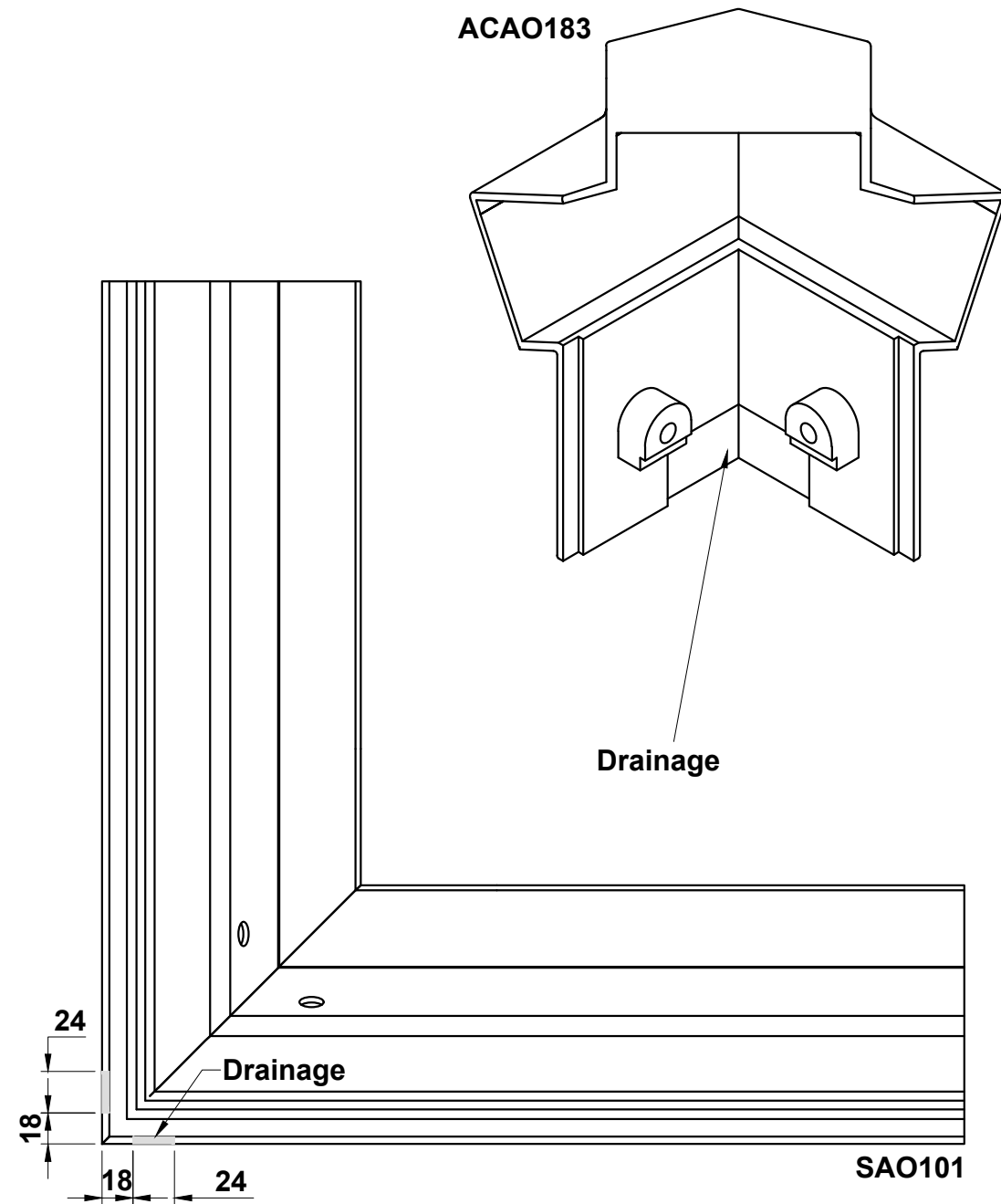
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SAO101 Corner Assembly



Do Not Scale From This Drawing

Drainage



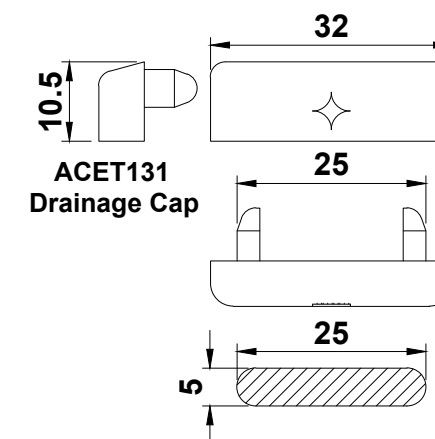
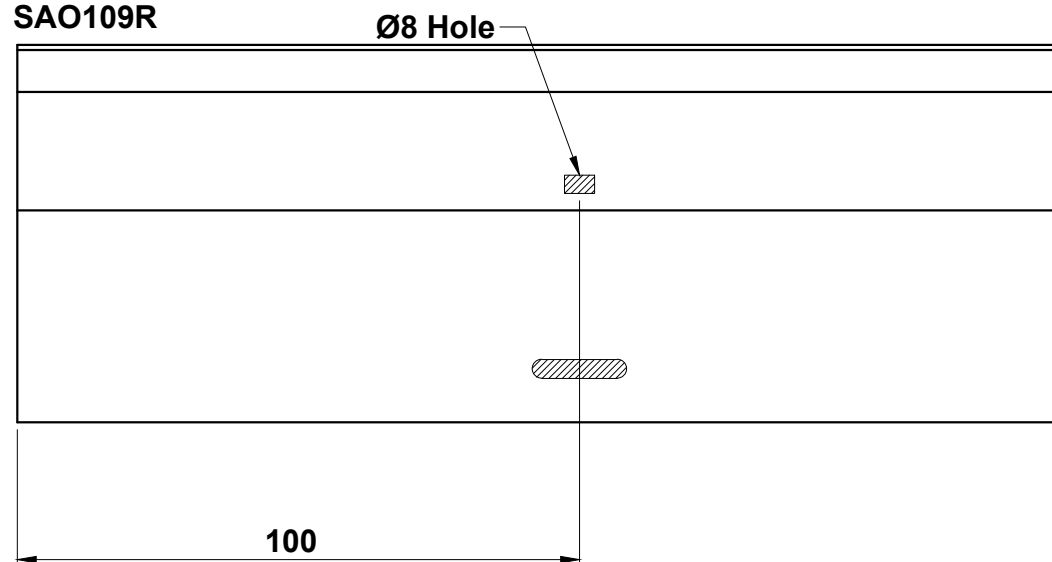
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Optional Additional Drainage

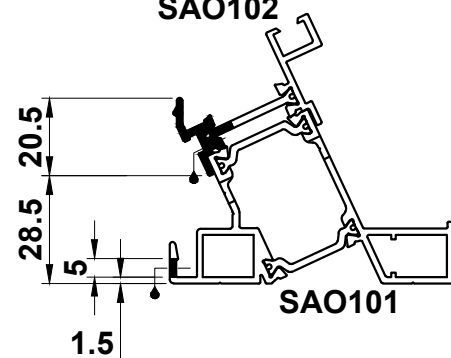
SAO109R



SAO109R



SAO102

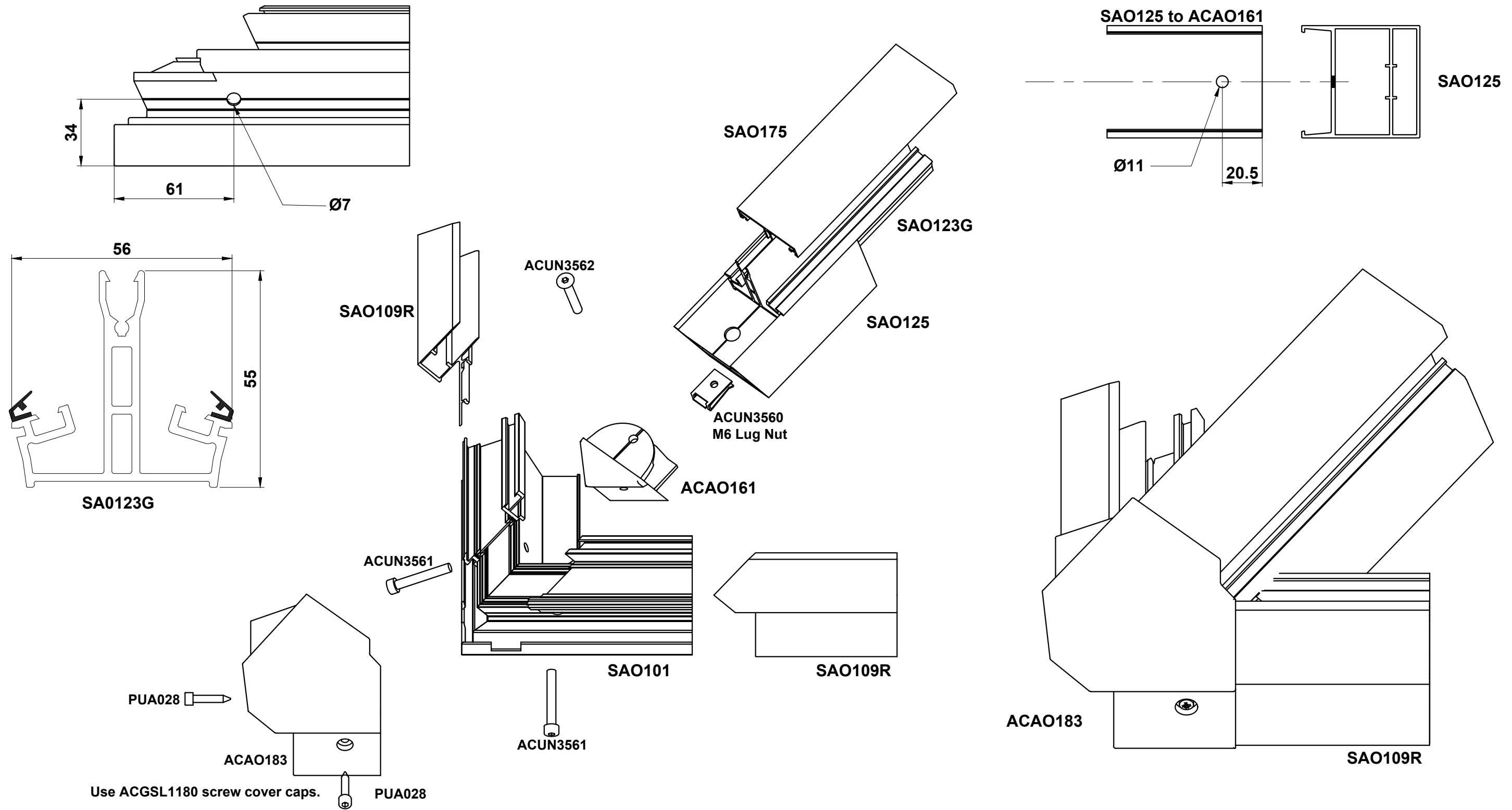


SAO101



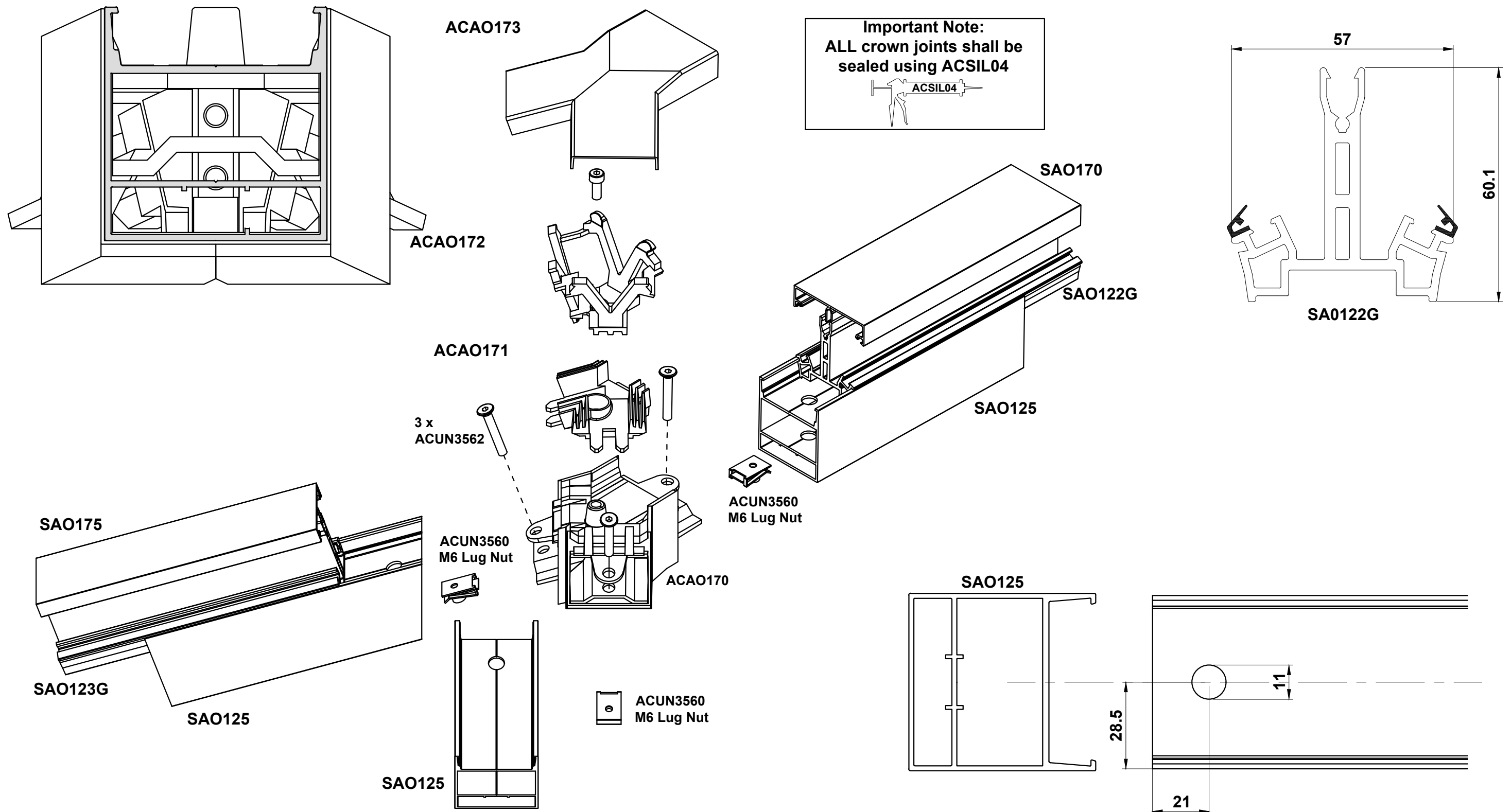
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Hip to Eaves Assembly



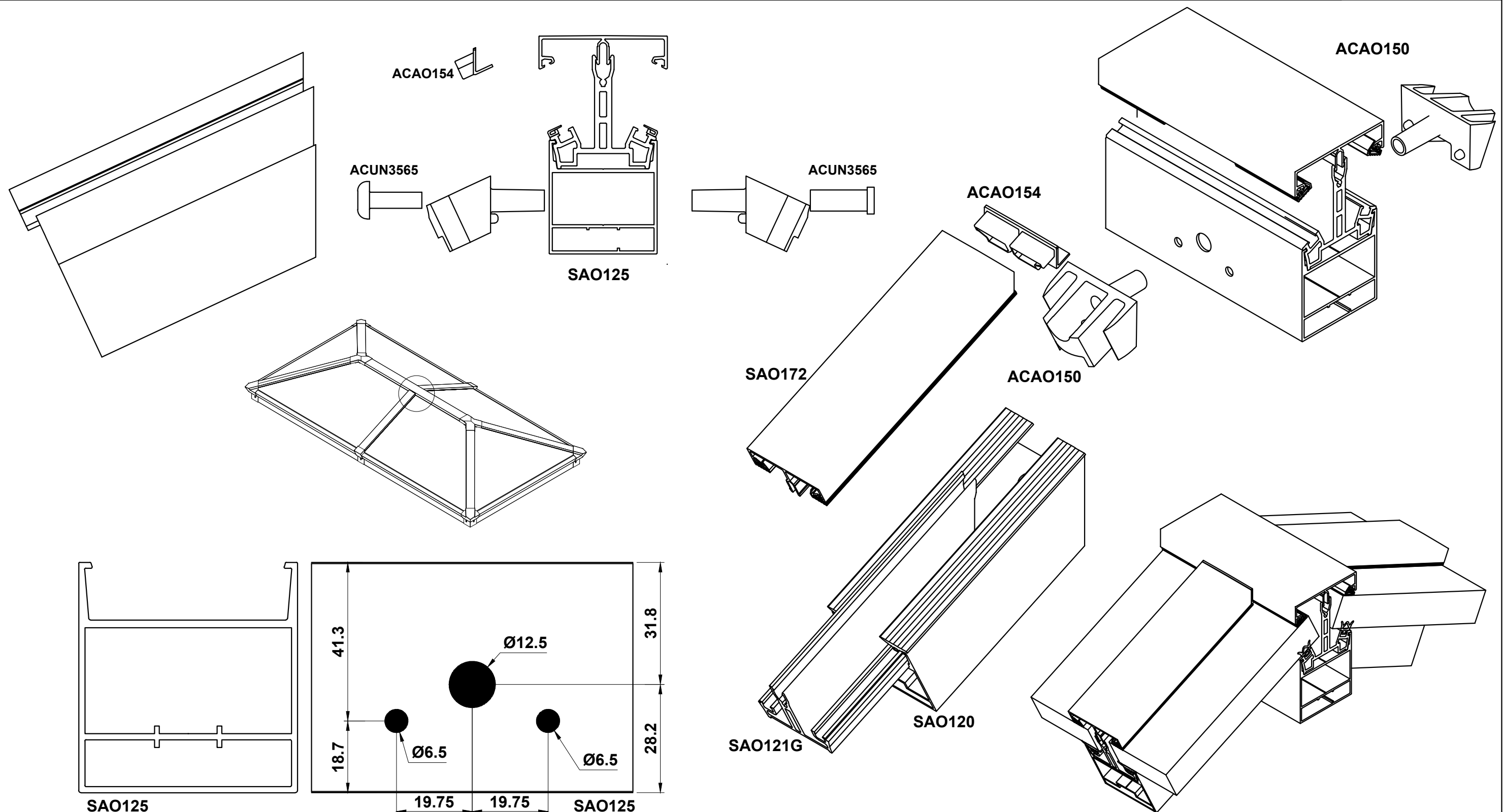
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Crown Assembly

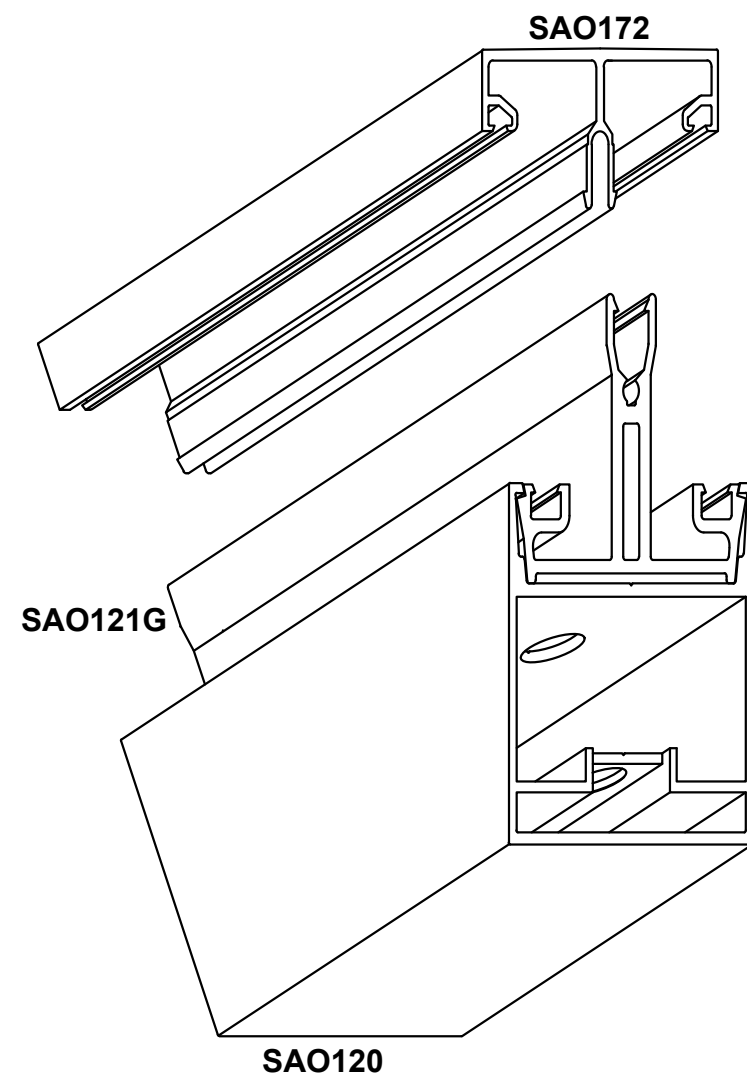


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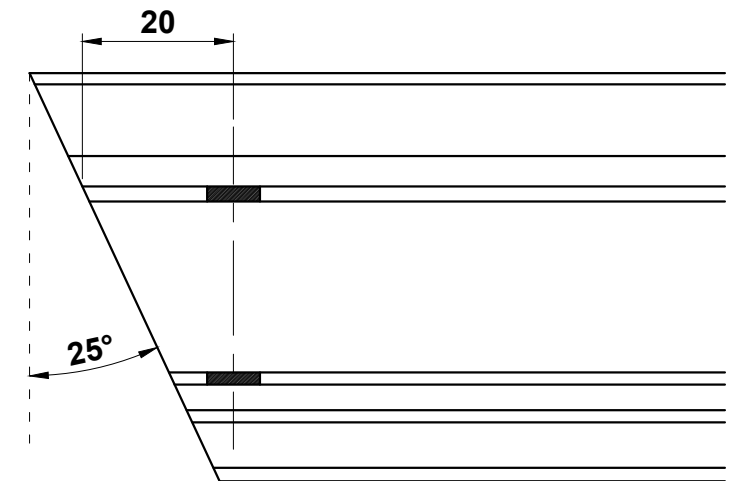
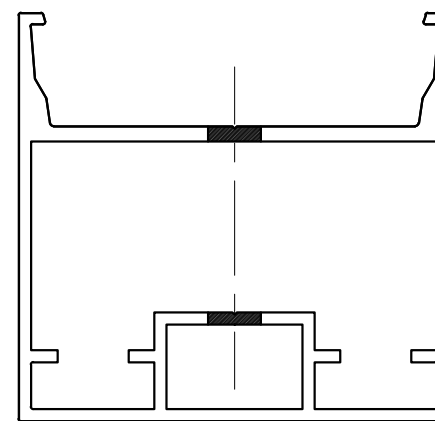
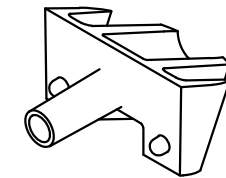
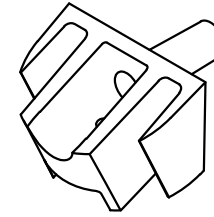
Rafter to Ridge - Ridge Machining



Rafter to Ridge - Rafter Machining

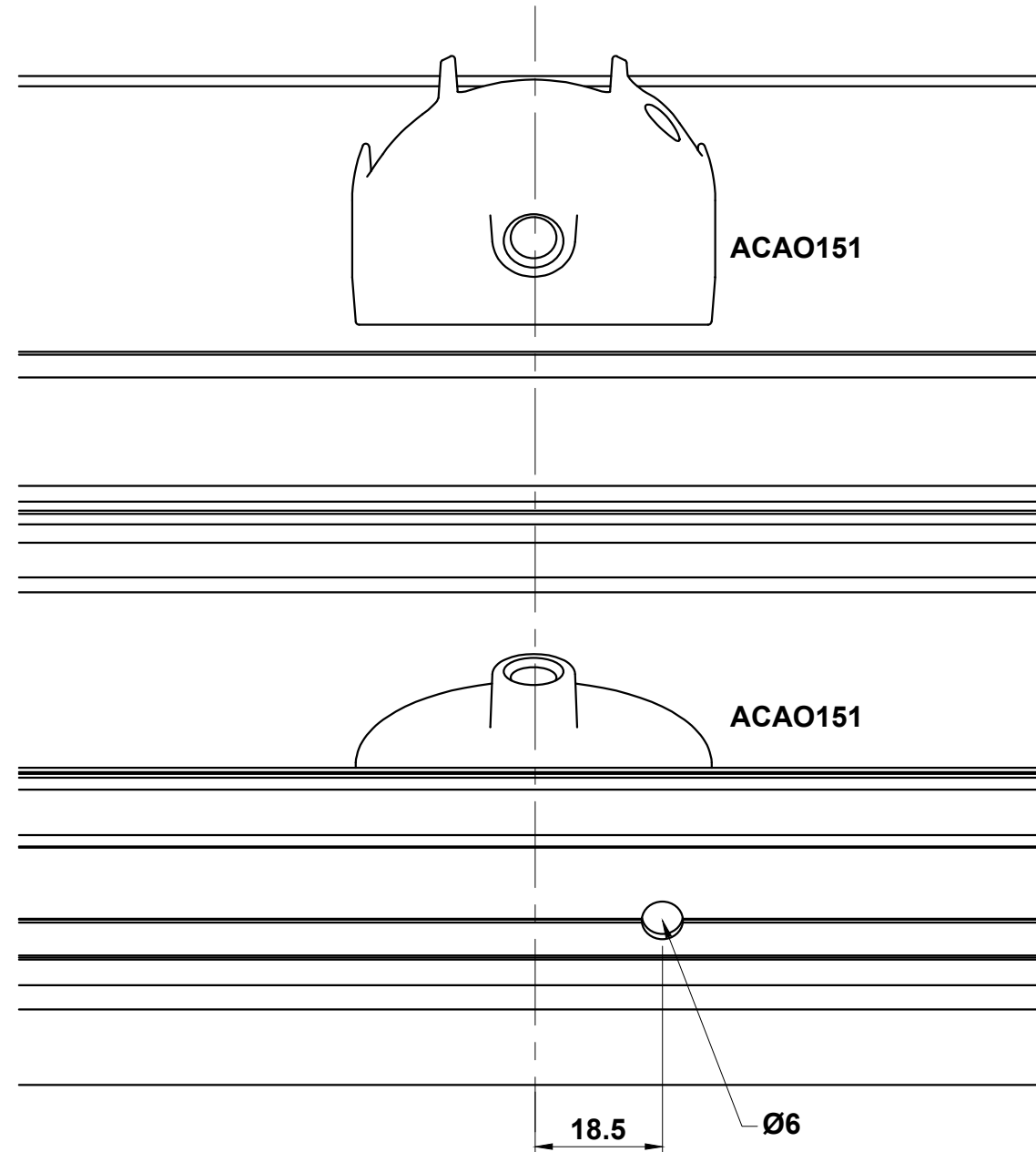
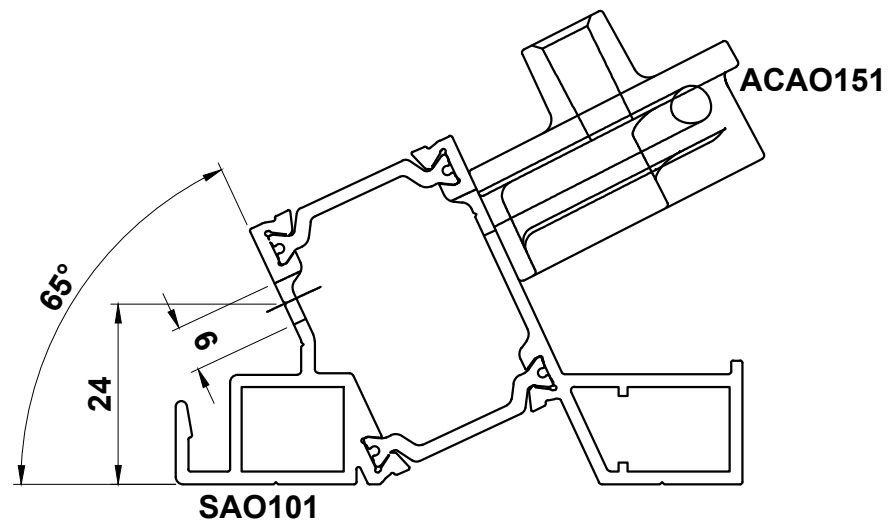
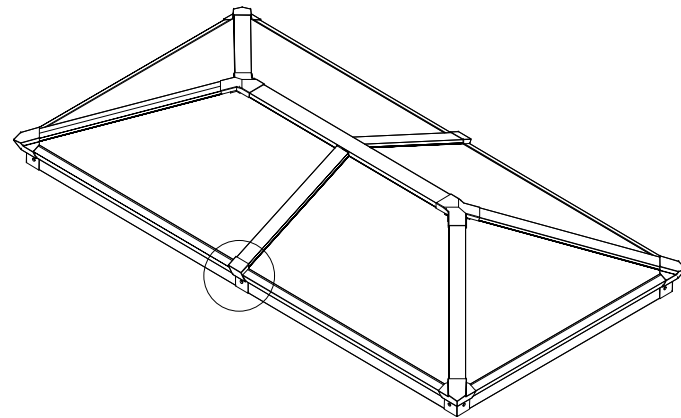


ACAO150

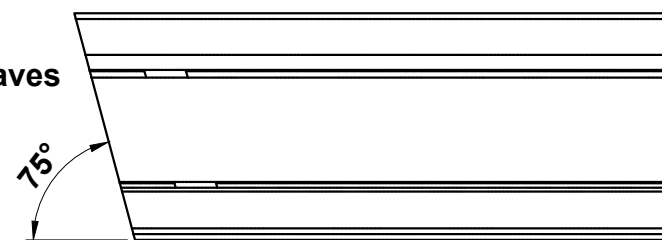


Do Not Scale From This Drawing

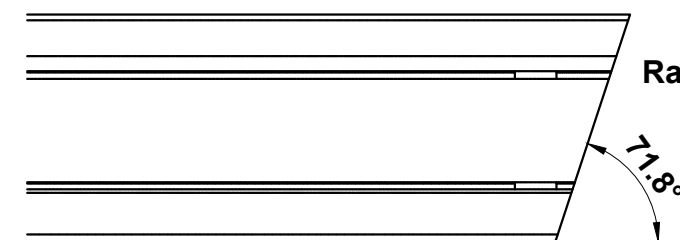
Rafter to Eaves Assembly



Rafter to Eaves

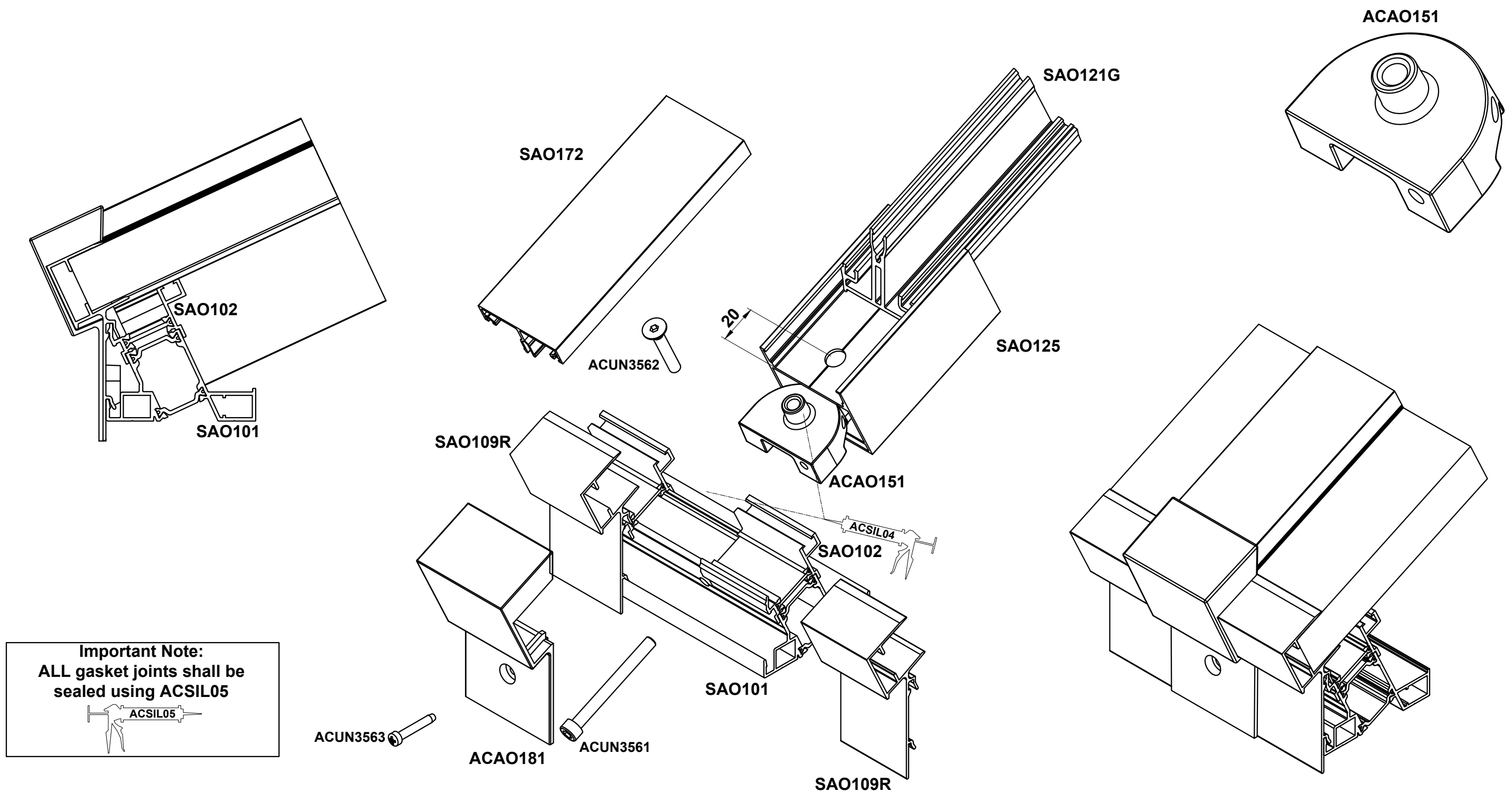


Rafter to Ridge



Do Not Scale From This Drawing

Rafter to Eaves Assembly

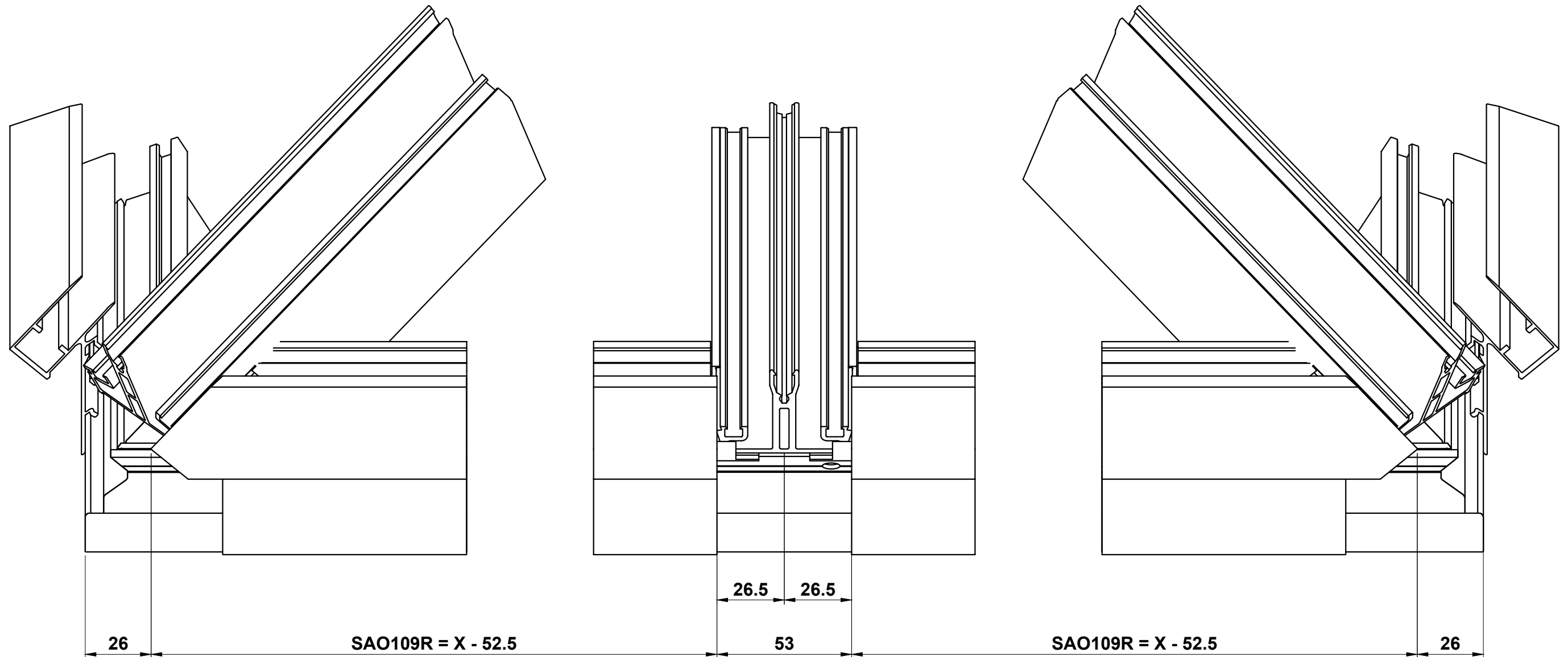


Important Note:
ALL gasket joints shall be
sealed using ACSIL05



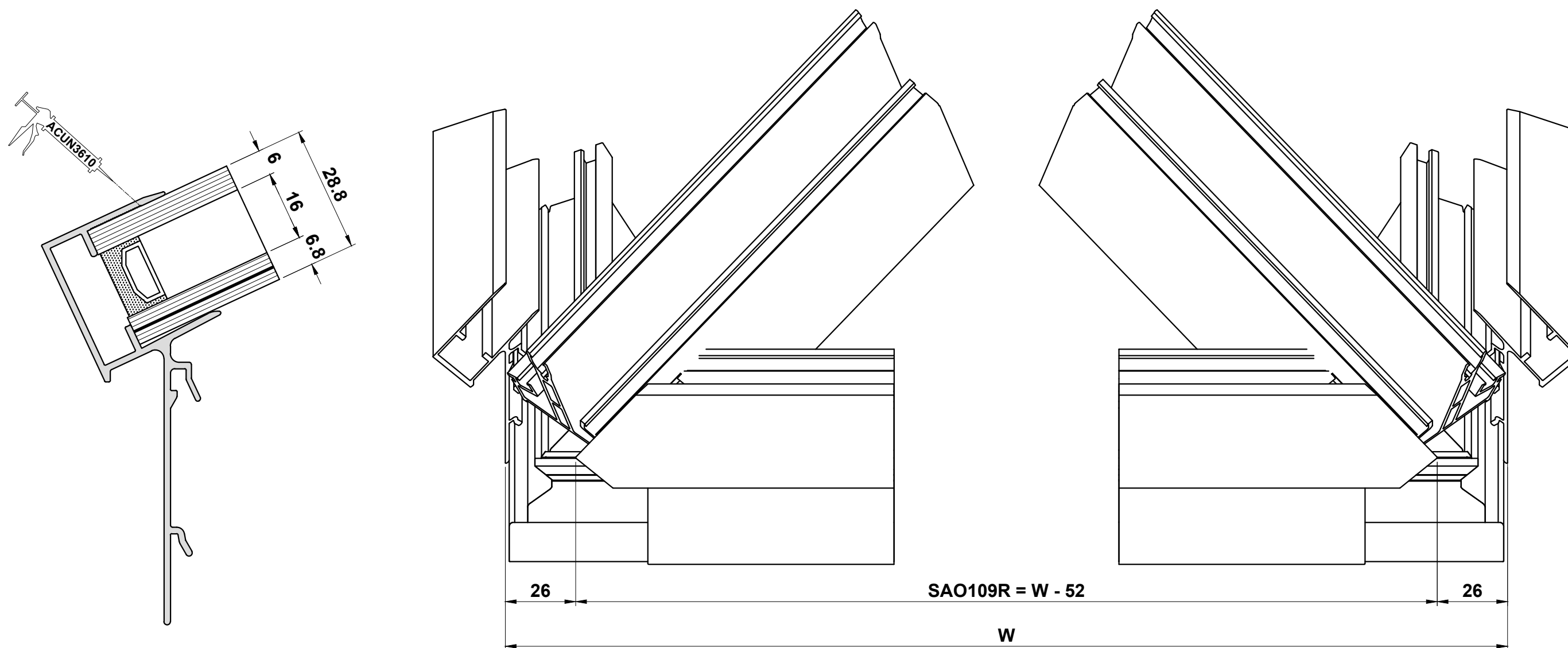
Do Not Scale From This Drawing

SAO109R Deductions = With Rafter



Do Not Scale From This Drawing

SAO109R Deductions = With Rafter

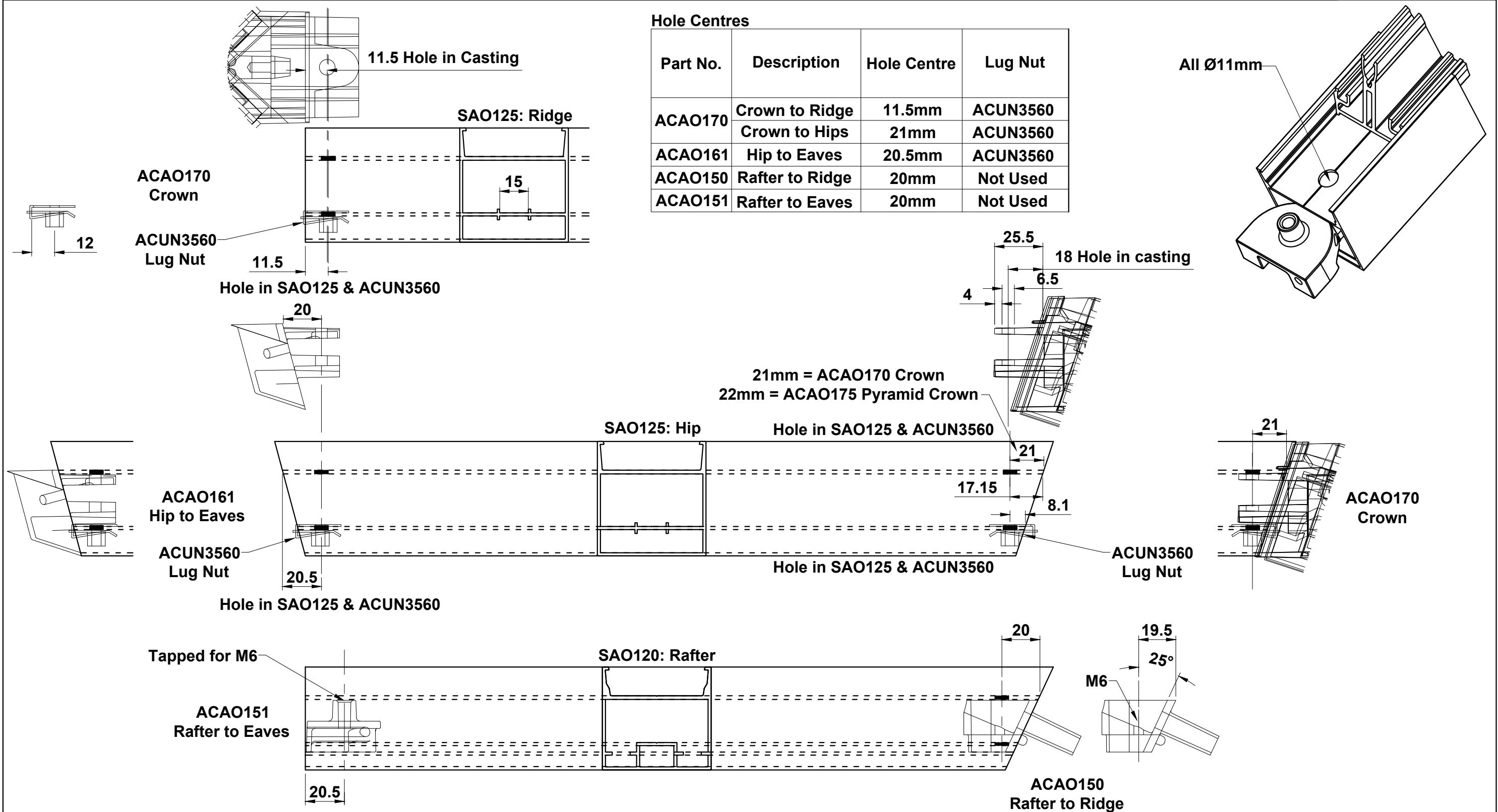


Do Not Scale From This Drawing

Section Hole Centres

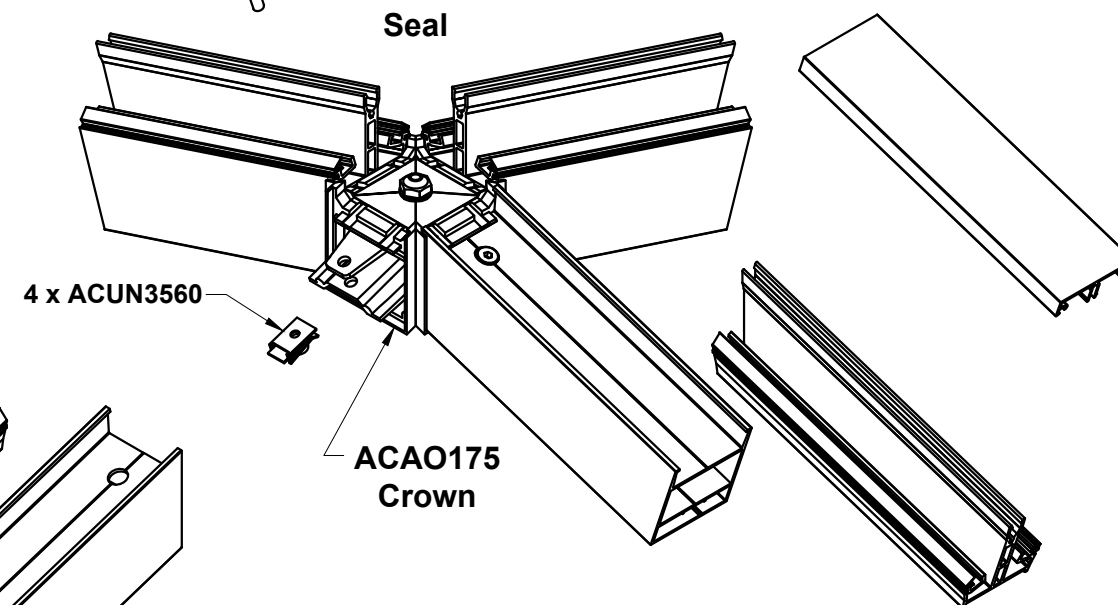
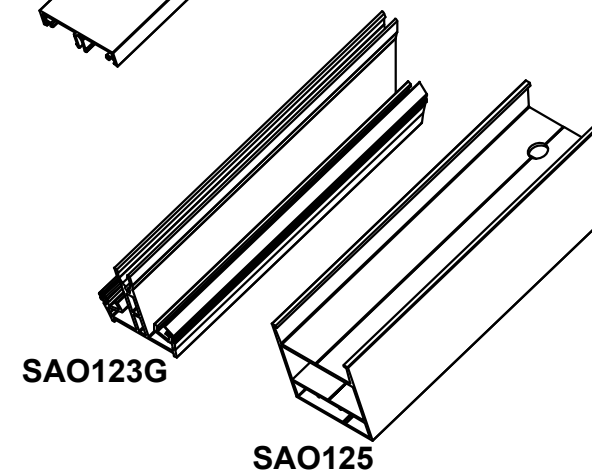
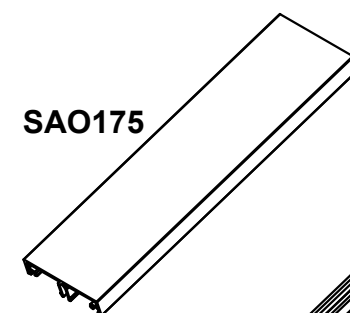
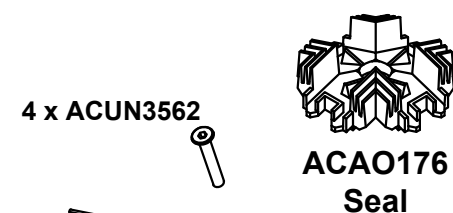
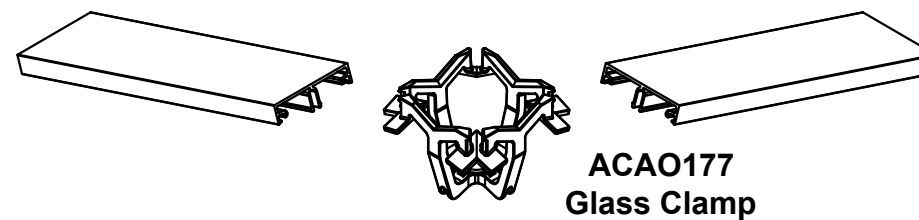
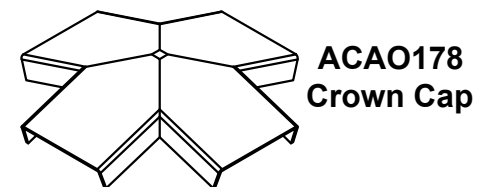
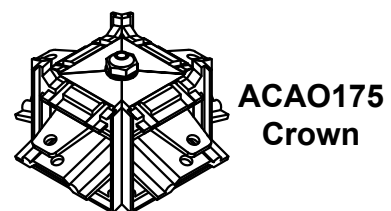
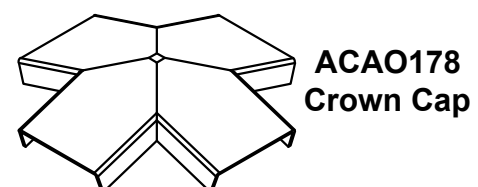
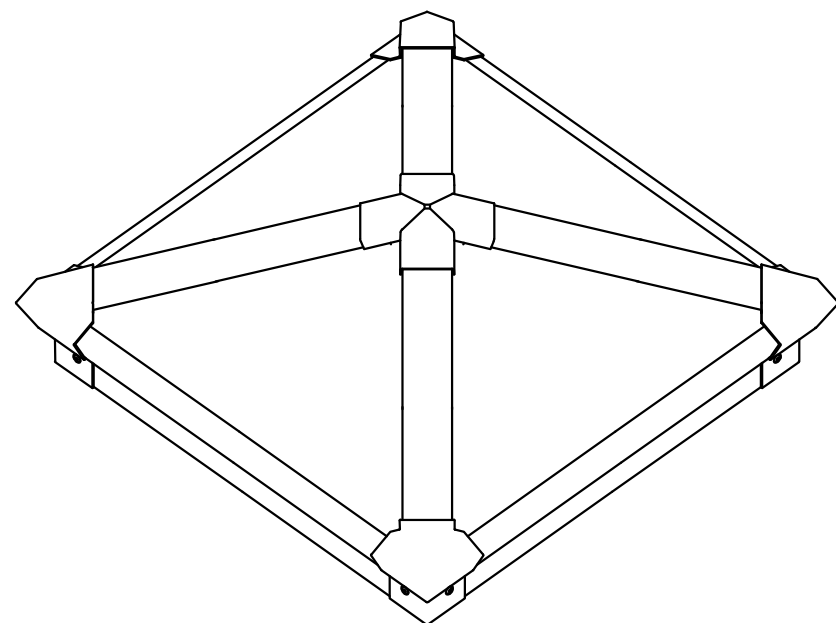
Hole Centres

Part No.	Description	Hole Centre	Lug Nut
ACAO170	Crown to Ridge	11.5mm	ACUN3560
	Crown to Hips	21mm	ACUN3560
ACAO161	Hip to Eaves	20.5mm	ACUN3560
ACAO150	Rafter to Ridge	20mm	Not Used
ACAO151	Rafter to Eaves	20mm	Not Used



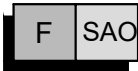
Do Not Scale From This Drawing

Pyramid Crown Assembly



Do Not Scale From This Drawing

Section F



Sawing Tables

Cutting Information..... F03 - F04

Do Not Scale From This Drawing

Do Not Scale From This Drawing

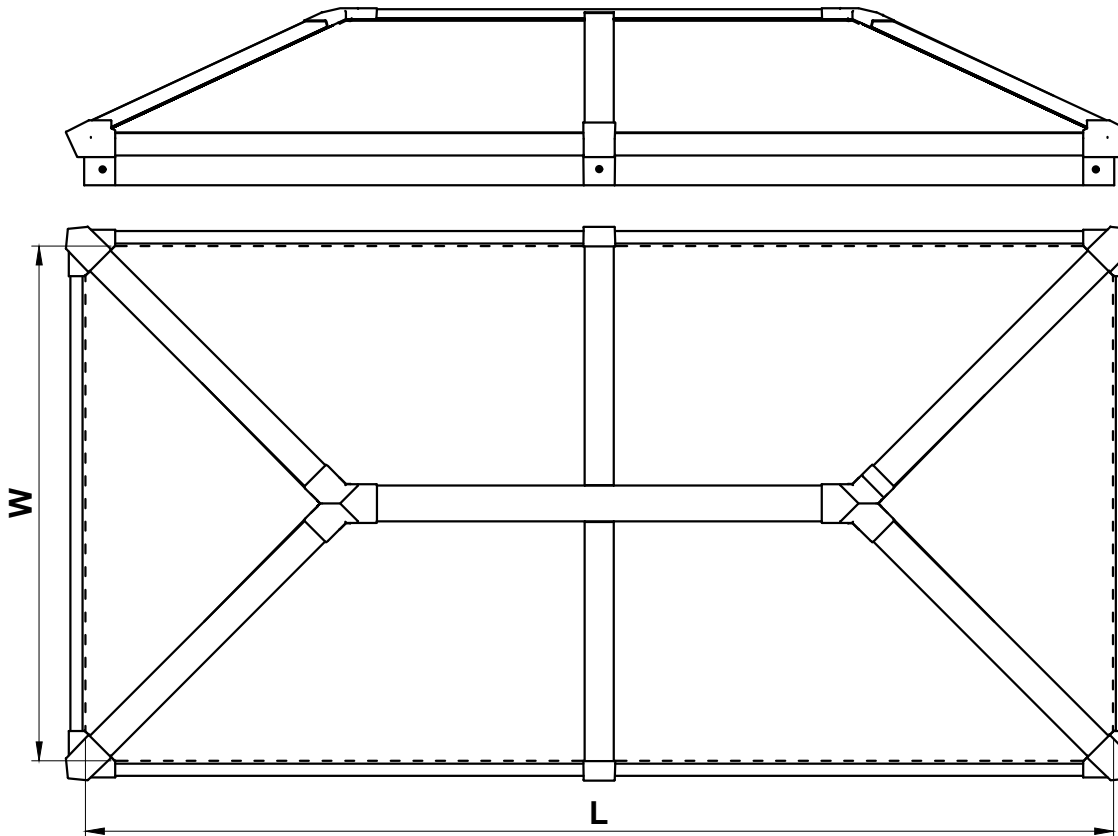
Cutting Information

PROFILE CUTTING SCHEDULE WITHOUT RAFTERS

EAVES	SAO101		2		W
	SAO101		2		L
	SAO102		2		W - 41.5
	SAO102		2		L - 41.5
RIDGE	SAO109R		2		W - 41.5
	SAO109R		2		L - 41.5
	SAO122G		1		(L-W)-72
	SAO125		1		(L-W)-34
HIPS	SAO170		1		(L-W)-34
	SAO123G		4		SAO125 + 39
	SAO125		4		(W/2) / COS 18.2 - 103
	SAO175		4		SAO125 + 39

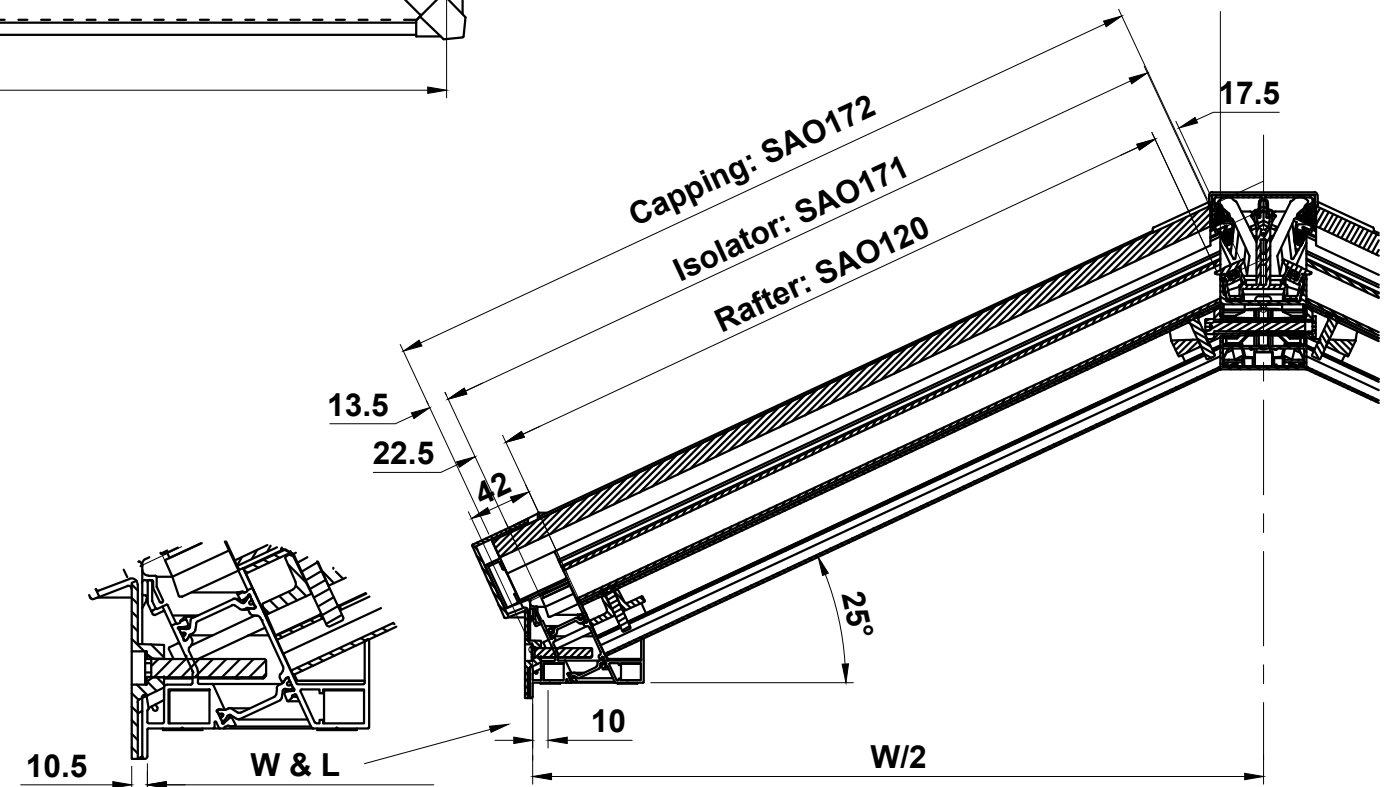
PROFILE CUTTING SCHEDULE WITH RAFTERS

EAVES	SAO102		2		W - 41.5
	SAO102		2		(L/2) - 45
	SAO102		2		(L/2) - 45
	SAO109R		2		W - 41.5
RAFTERS	SAO109R		2		(L/2) - 45
	SAO109R		2		(L/2) - 45
	SAO120		2		(W/2) / COS 25 - 59.5
	SAO121G		2		SAO120 + 22.5
	SAO172		2		SAO123 + 33



ACCESSORIES

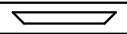
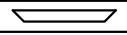
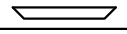
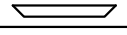
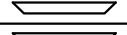
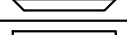
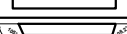
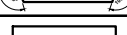
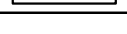
EAVES	ACAO164	4	Cleat
	ACAO186	2 x W & 2 x L	Foam Tape
	ACMC017	2 x W & 2 x L	Gasket
RIDGE & HIPS	ACAO161	4	Hip to Eaves Bracket
	ACAO170	2	Main Crown Body
	ACAO171	2	Crown Rubber Seal
	ACAO172	2	Crown Pressure Plate
	ACAO173	2	Crown Cap
	ACAO183	4	Hip End Caps
	ACET390	300mm Centres	25mm Polyamide Screw. SAO102.
	ACGSL1180	2	Screw Cover Caps
	ACMC017	2 x Ridge/ 8 x Hip	SAO102 Gasket
	ACUN3560	10	M6 Lug Nut
	ACUN3561	8	M6 x 40 CSK Screw. ACAO161 & ACAO170
	ACUN3562	10	M6 x 40 Button Head Screw. ACAO161
	ACVR201	2 x Ridge/ 8 x Hip	SAO172 & SAO175 Gasket
	PUA028	8	No.10 x 25mm Self Tapper. ACAO183
RAFTER	ACAO150	2	Rafter to Ridge Brackets
	ACAO151	2	Rafter to Eaves Brackets
	ACAO154	2	Rafter to Ridge Capping Seal
	ACAO181	2	Rafter End Caps
	ACGSL1180	2	Screw Cover Caps
	ACUN3561	8	M6 x 40 CSK Screw. ACAO161 & ACAO170
	ACUN3562	10	M6 x 40 Button Head Screw. ACAO161
	ACUN3565	1	M6 Male/Female Screw Kit
	ACVR201	4 x Rafter	SAO172 Gasket
	PUA028	2	No.10 x 25mm Self Tapper. ACAO183



Do Not Scale From This Drawing

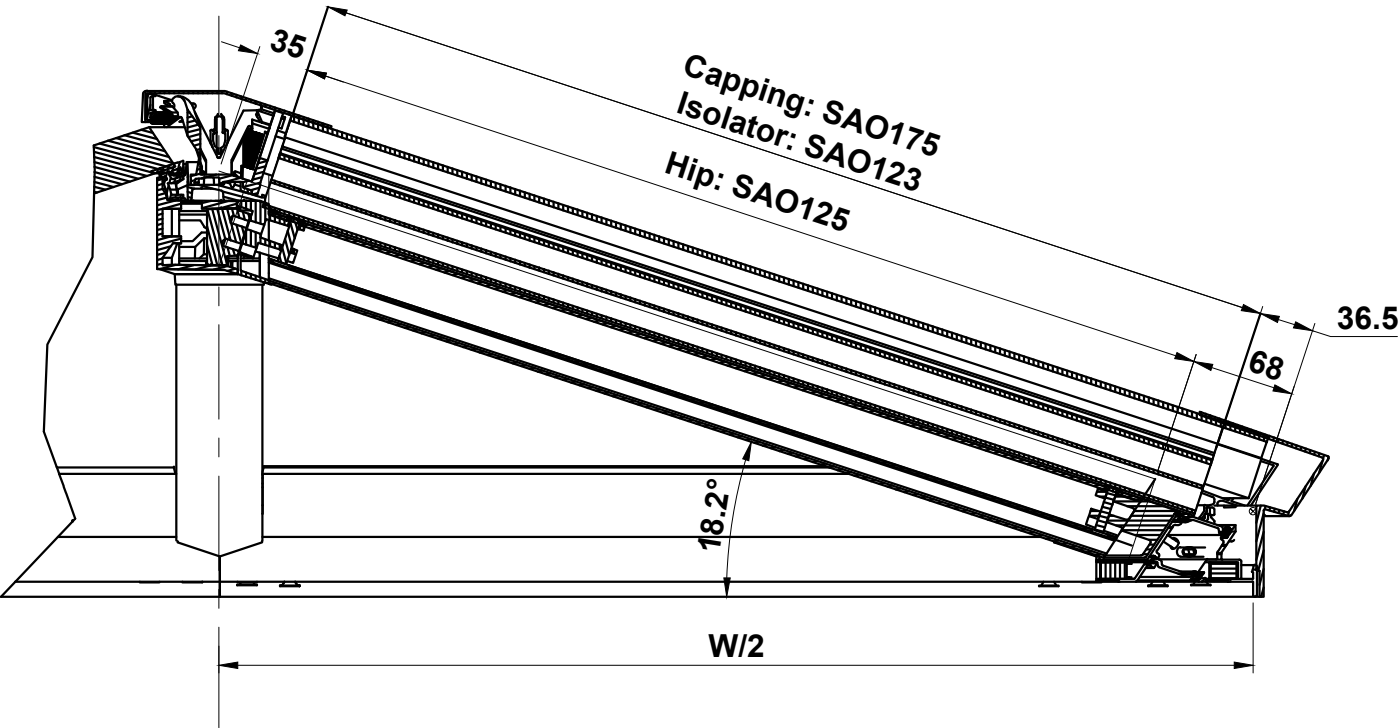
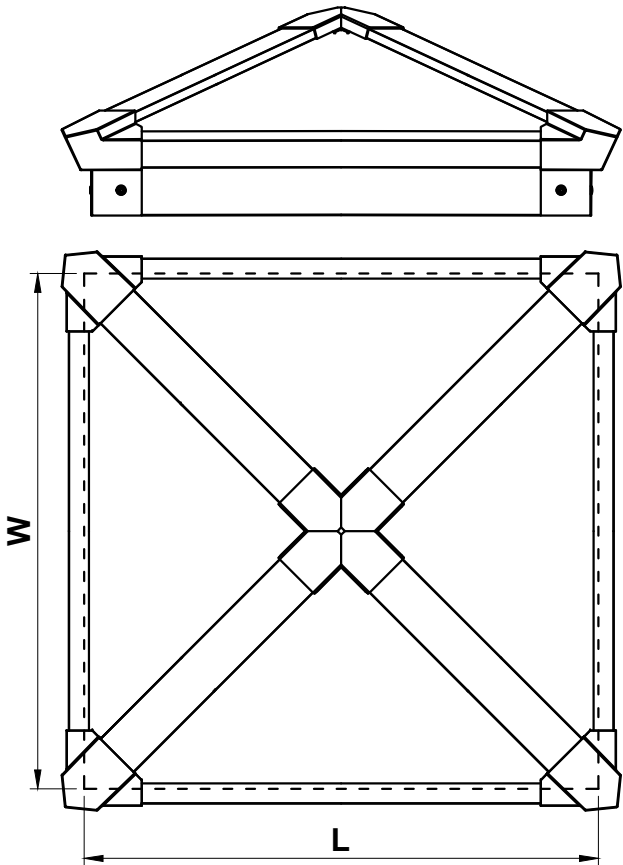
Cutting Information

PROFILE CUTTING SCHEDULE

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	SAO101		2		L
	SAO102		2		W - 41.5
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	SAO109R		2		L - 41.5
HIPS	SAO123G		4		SAO125 + 39
	SAO125		4		(W/2√2) / COS 18.2 - 103
	SAO175		4		SAO125 + 39

ACCESSORIES

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	ACAO186	2 x W & 2 x L	Foam Tape
	ACMC017	2 x W & 2 x L	Gasket
RIDGE & HIPS	ACAO161	4	Hip to Eaves Bracket
	ACAO170	2	Main Crown Body
	ACAO171	2	Crown Rubber Seal
	ACAO172	2	Crown Pressure Plate
	ACAO173	2	Crown Cap
	ACAO183	4	Hip End Caps
	ACET390	300mm Centres	25mm Polyamide Screw. SAO102.
	ACGSL1180	2	Screw Cover Caps
	ACMC017	2 x Ridge/ 8 x Hip	SAO102 Gasket
	ACUN3560	10	M6 Lug Nut
	ACUN3561	8	M6 x 40 CSK Screw. ACAO161 & ACAO170
	ACUN3562	10	M6 x 40 Button Head Screw. ACAO161
	ACVR201	2 x Ridge/ 8 x Hip	SAO172 & SAO175 Gasket
	PUA028	8	No.10 x 25mm Self Tapper. ACAO183



Do Not Scale From This Drawing