
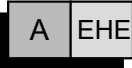
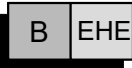
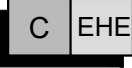

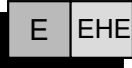



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Updates

DATE	PAGE	DESCRIPTION
January 2020	All Sections	<p>Profiles: EHE202 Walk On Roof Outer Frame Added. EHE230 Mullion Added. EHE256 PVC Infill Added. UTL049 20mm x 20mm Aluminium Box added.</p> <p>Accessories: ACPD908 Acrylic Clear Tape Added. ACUN3616 Coil Length Amended. HEA208 Cleat Pack Added. HEA209 Cleat Pack Added. HEA210 Support Block Added. HEA211 Fixing Bracket Added. HEA213 Drill Jig Added. HEA214 Drill Jig Added. HEA290 Contour Block Added.</p>
July 2022	All Sections	<p>Profiles: EHE200 Superseded by EHE200N. EHE201 Triple Glazed Outer Frame Added. EHE202 Superseded by EHE202N. EHE206 Rooflight Frame Added. EHE252 Aluminium Plasterboard Cap.</p> <p>Accessories: ACET060 Screw Added. ACET131 PVC Drainage Cap Added. ACET432 Zinc Drainage Cap Added. APMC305 Flipper Gasket Added. ACVS042 Fixing Plate HEA200 Cleat Kit Removed. HEA204 Cleat Kit Added. HEA207 Cleat Kit Added. HEA208 Cleat Kit Removed. HEA212 Cleat Kit Added. HEA250 Rooflight Hinge Added. HEA254 Opening Pivot Bracket Added. HEA255 Fixing Block Added. HEA256 Actuator Bracket Added. HEA912 changed to HEA918</p>

Specification

GENERAL DESCRIPTION

The "Aliver Rooflight" roof system described in this manual is designed to offer a modern aluminium flat roof light with concealed fixings.

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

SIZE LIMITS

Rectangular Size Limits (without EHE230 Mullion)

Size limits will be set by third party glass supplier.

Rectangular Size Limits (with EHE230 Mullion) See page D02 for further detail.

Max Length: 6350mm

Max Width: 3000mm

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 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 using Tungsten Carbide Tipped Saw Blades, operating at approximately 3000 rpm.

The corners are joined using machine screws into extruded cleats through the mitred ends of the section.

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.

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

Specification

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.

Corners are formed by either drilling, using drill jig ACVG956, or punching, using punch tool HEA918, 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 (sealer requires a minimum of 48 hours to cure). After screwing the corner joint, special care should be taken to ensure any excess sealer is removed from painted surfaces.

INSTALLATION INFORMATION

The Rooflight shall be fitted to a kerb with a minimum height of 150mm above the finished surface. The overall external dimensions of the kerb must be measured, including the finishes, to establish the overall dimensions of the rooflight.

The rooflight is sealed and fitted on top of the finished kerb and secured using fixing lugs or direct fixing as shown in section E of this manual.

To aid water run-off, we recommend installing the rooflight at a minimum pitch of 5°.

Aliver Rooflight U Values

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

GLAZING

Rooflight glazing must comply with the standards set by BS EN 1991-1-1 & CWCT TN61-TN69 depending on the roof light application and requirements. Please liaise with your glass supplier for specification.

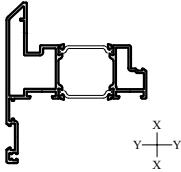
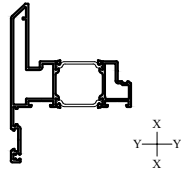
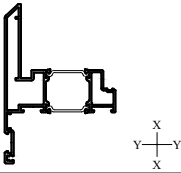
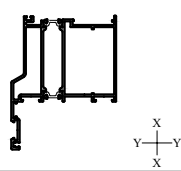
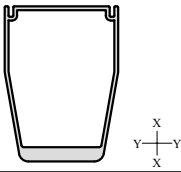
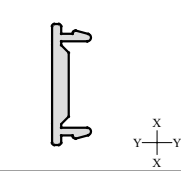
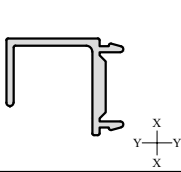
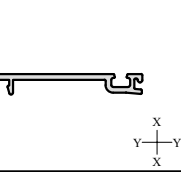
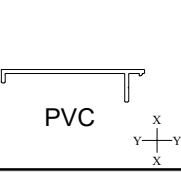
We recommend a 75mm border around the perimeter of the units to mask the frame from the outside.

The glass is to be bonded using ACUN3610 high quality single component adhesive applied in the workshop at least a day prior to installation. Please refer to the glazing pages in the manual for full instructions.

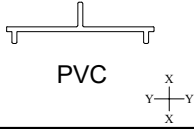
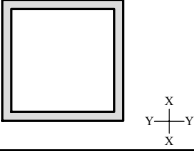
TEST CERTIFICATE

	Max Test Pressure	Classification
Air Permeability Classification	600 Pa	4
Watertightness Classification	1500 Pa	E1500
Resistance To Wind Classification	2000 Pa	C5

PROFILES : TECHNICAL INFORMATION

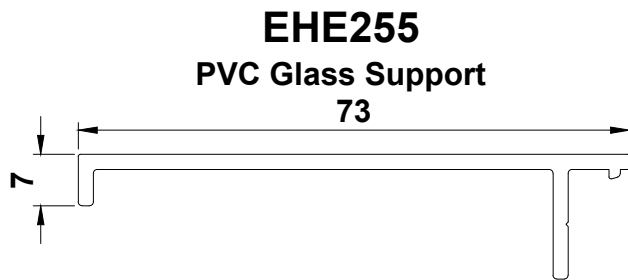
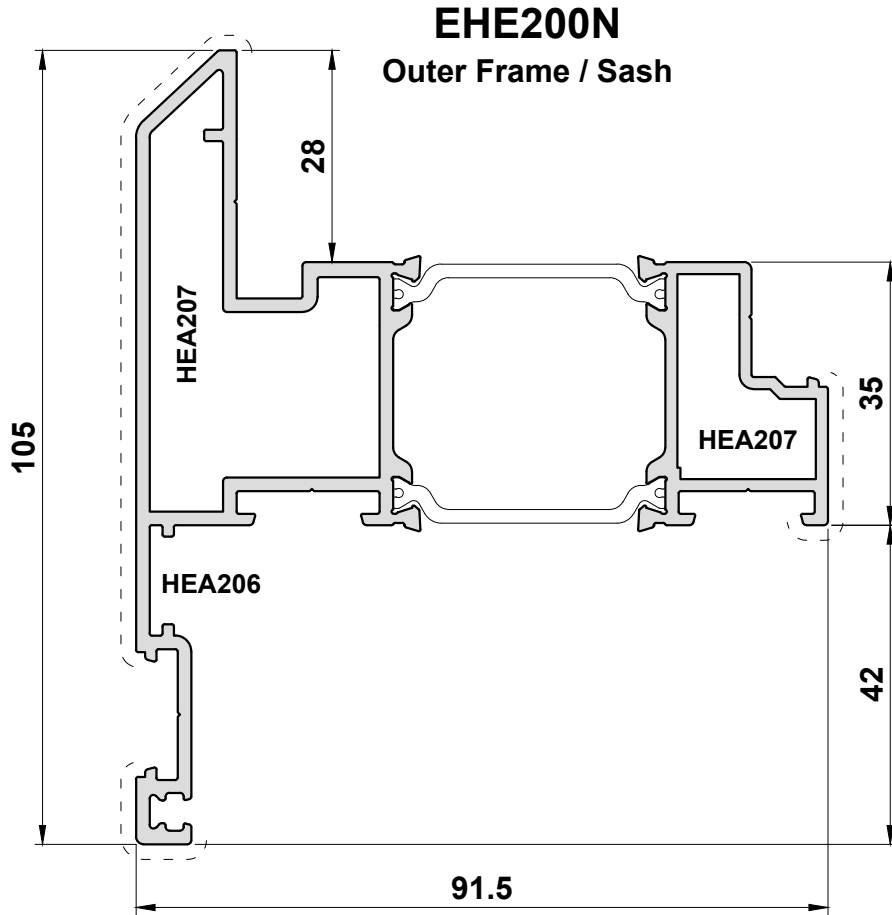
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EHE200N		A07	531	125	40.17 — 7.06	71.2 — 23.04	6.5	-	✓	✓	✓	✓	✓	
EHE201		A08	563	139	58.87 — 9.59	74.58 — 25.72	6.5	-	✓	✓	✓	✓	✓	
EHE202N		A09	583	149	75.45 — 11.28	76.5 — 27.13	6.5	-	✓	✓	✓	✓	✓	
EHE206		A11	718	191	98.80 — 13.86	94.83 — 23.65	6.5	-	✓	✓	✓	✓	✓	
EHE230		A10	286	207	75.09 — 15.36	31.62 — 10.54	6.5	-	✓	✓	✓	✓	✓	
EHE250		A07	50	16	— — -	— — -	4.0	-	✓	✓	✓	✓		
EHE252		A07	98	28	— — -	— — -	4.0	-	✓	✓	✓	✓		
EHE254		A11	113	40	— — -	— — -	6.5	-	✓	✓	✓	✓		
EHE255		A07	189	-	— — -	— — -	5.0	-	✓					
									A = Outside B = Inside		MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

PROFILES : TECHNICAL INFORMATION

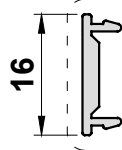
Number	Picture	Page	Perim. mm	Mec. mm	Ix(cm4) wx(cm3)	Iy(cm4) wy(cm3)	Length	Pack pr.	MF	SA	KL	HP	M
EHE256	 PVC	A10	161	-	-	-	5.0	-	✓				
UTL049		A09	64	64	-	-	6.0	-	✓	✓	✓	✓	
									A = Outside B = Inside	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour M = Dual Colour			

Primary Visible Side

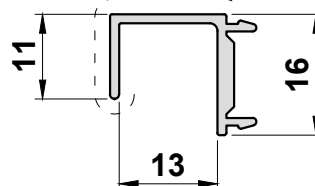
Secondary Visible Side



EHE250
Aluminium Infill



EHE252
Aluminium Infill
Plaster Board Cap

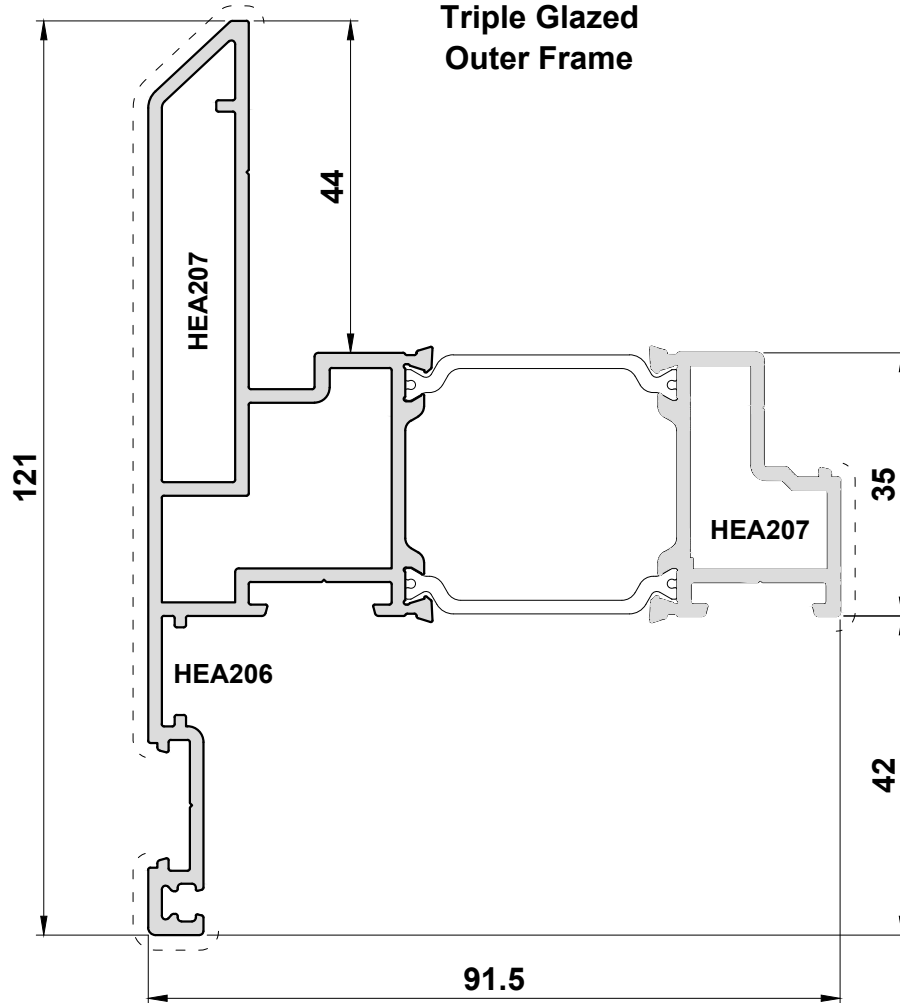


Scale 1:1

Primary Visible Side

Secondary Visible Side

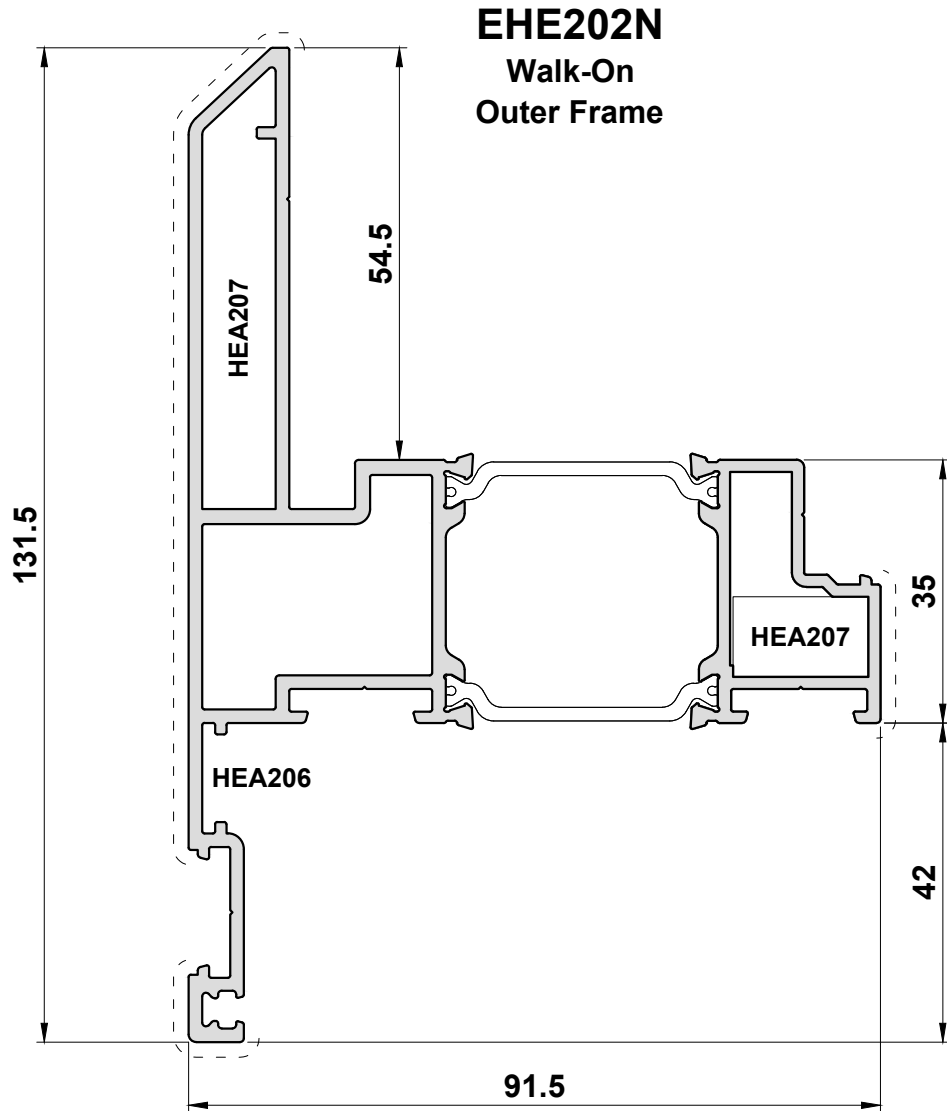
EHE201 Triple Glazed Outer Frame



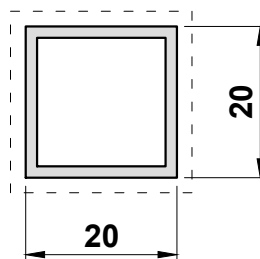
Scale 1:1

Primary Visible Side

Secondary Visible Side



UTL049
20mm x 20mm Section

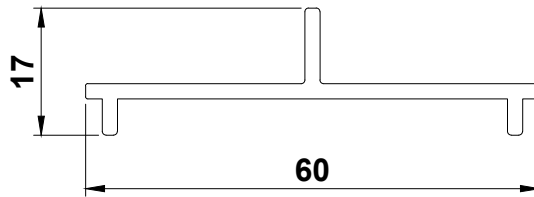


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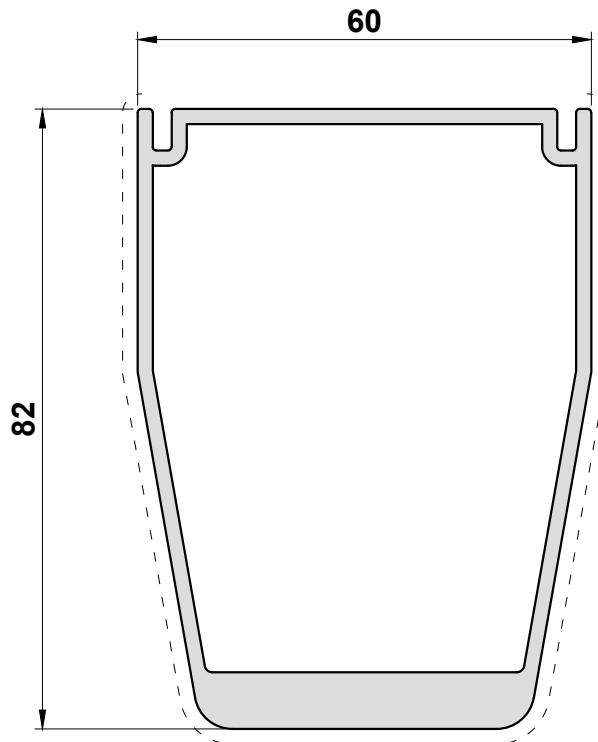
Primary Visible Side

Secondary Visible Side

EHE256
EHE230 PVC
Glass Support



EHE230
Intermediate
Mullion

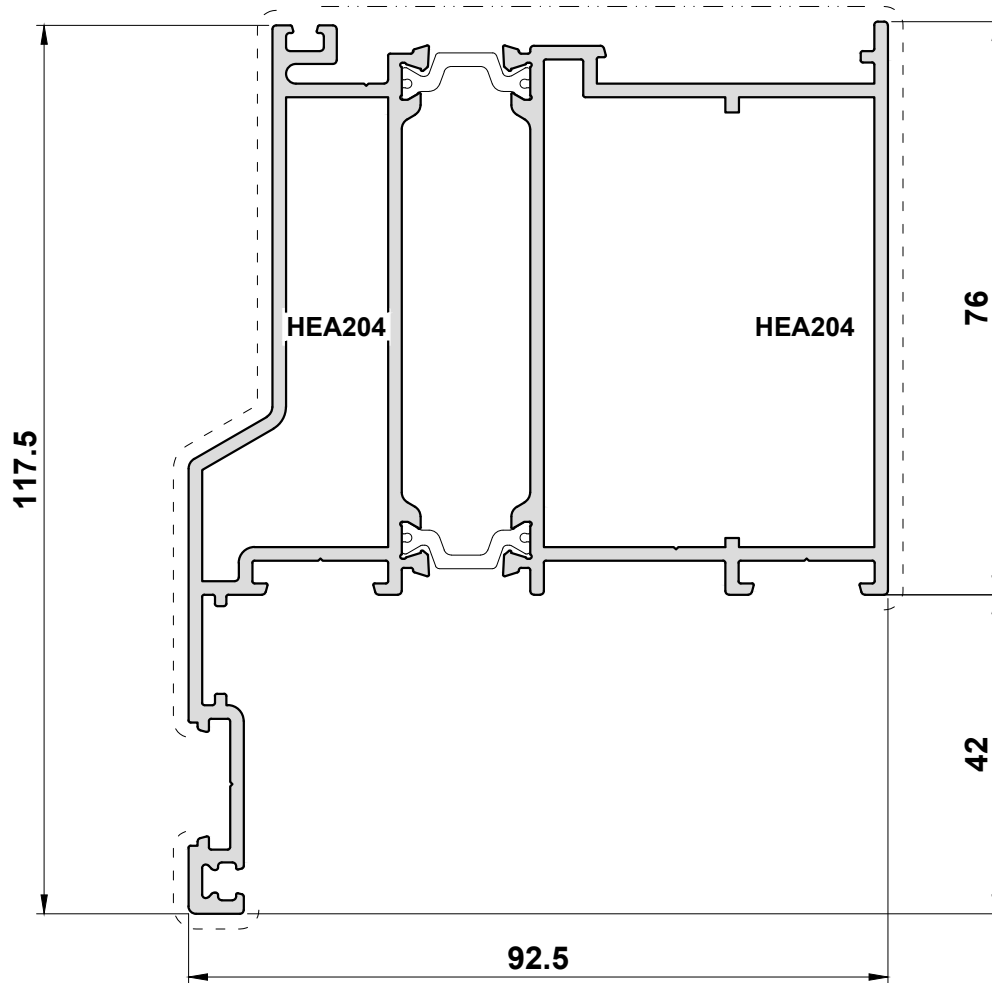


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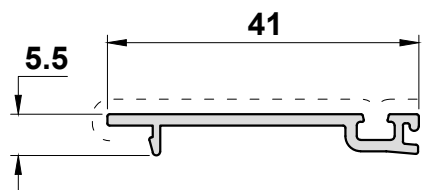
Primary Visible Side

Secondary Visible Side

EHE206 Opening Outer Frame



EHE254 Gasket Carrier



Scale 1:1

Primary Visible Side

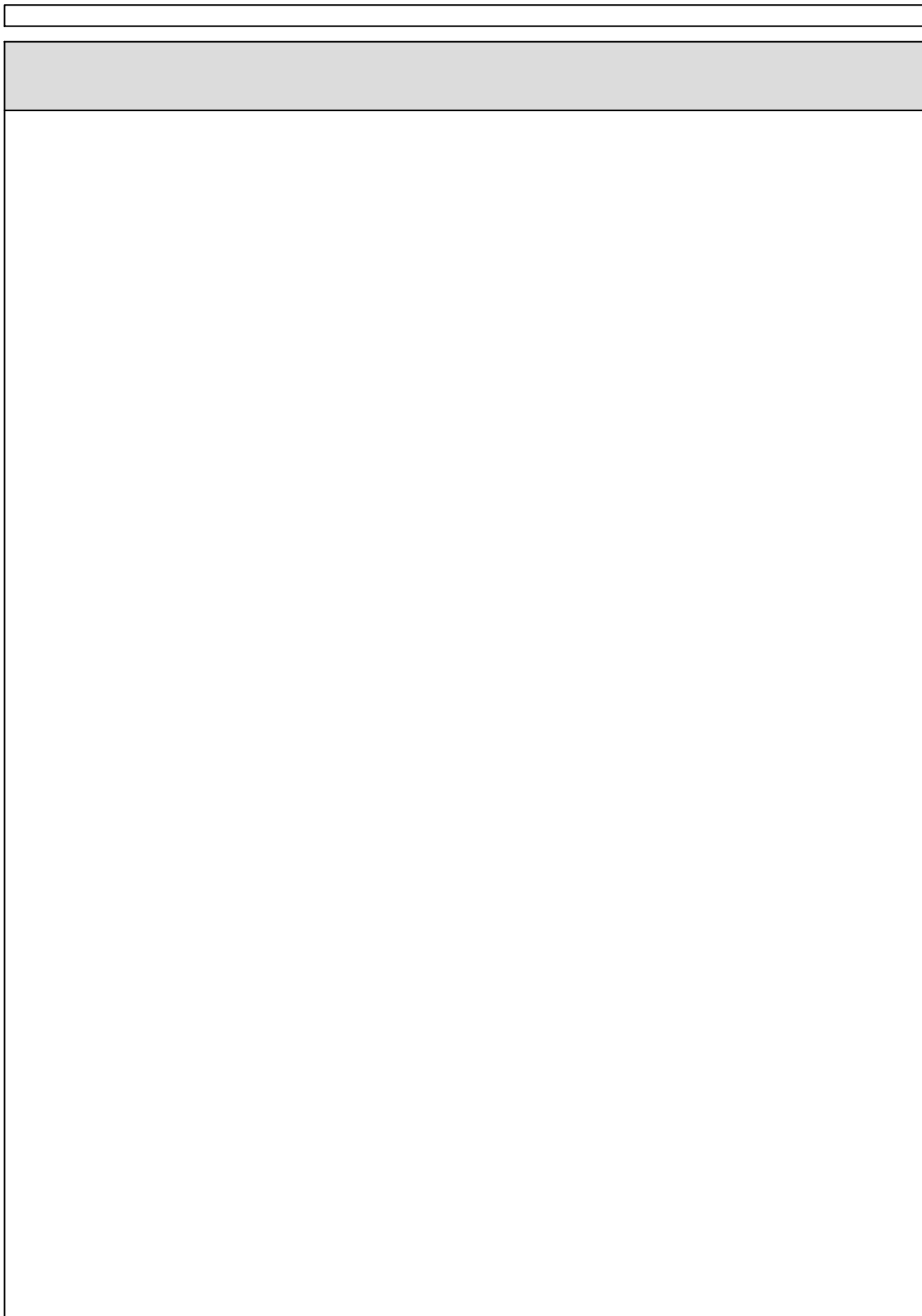
Secondary Visible Side

Scale 1:1

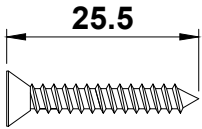
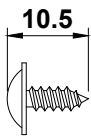
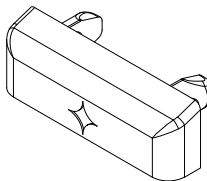
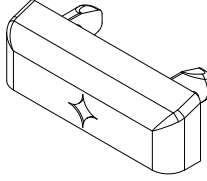



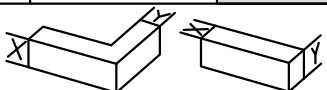
Section B

Accessories

Photos & Drawings




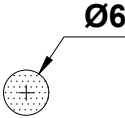
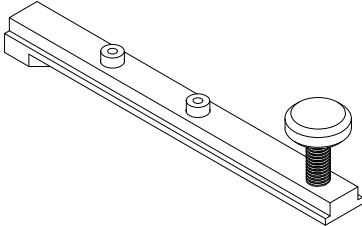
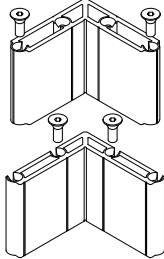
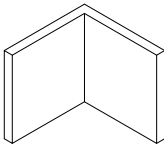

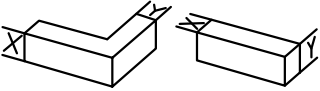
ACCESSORIES : PHOTOS & DRAWINGS

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					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET068 No. 8 x 10 S/S Self Tapping Flange Screw	100	pack	EHE255	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACET131 Drainage Cover Cap For colour matched drainage caps see ACET432	100	pack		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	ACET432 Drainage Cover Cap Colour Matched Drainage Caps	10	pack		MF	
					SA	
					KL	✓
					HP	✓
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMC305 Flipper Gasket	50	m	EHE254	MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	✓
					PC	
 <small>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</small>	 <small>Screw (Grub)</small>	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			

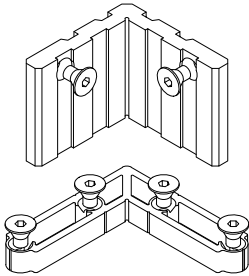
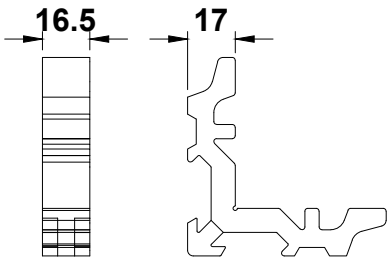
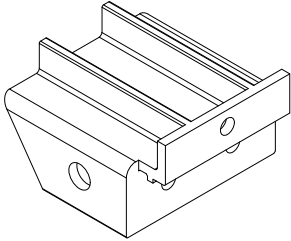
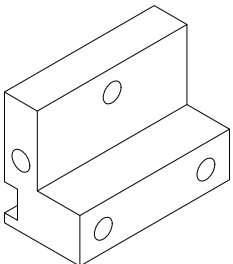
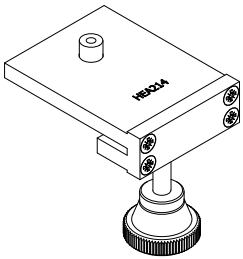

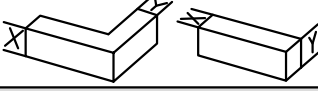
ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour																		
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SMC																							
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	ACUN23X Screw Fixing Lug B x 38mm x 2mm ACUN230: B = 160mm ACUN232: B = 240mm ACUN233: B = 280mm	100	Pack	EHE200N EHE201 EHE202N EHE206	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL		HP		SSC		SMC		W		Z		PC	
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SSC																							
SMC																							
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PC																							
	ACUN3514 M5 x 25 S/S Pan Head Machine Screw	100	pack	HEA254	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL		HP		SSC		SMC		W		Z		PC	
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SSC																							
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PC																							
	ACUN3558 M5 x 10 S/S Pan Head Machine Screw	100	pack	HEA255	<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL		HP		SSC		SMC		W		Z		PC	
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SA																							
KL																							
HP																							
SSC																							
SMC																							
W																							
Z																							
PC																							
<p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black																					

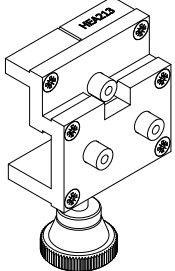
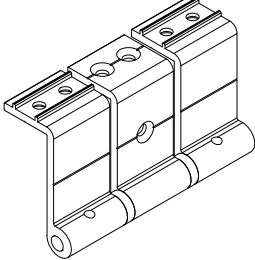
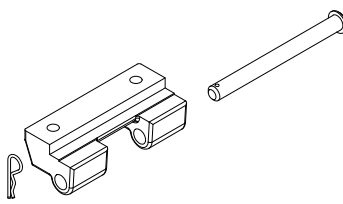
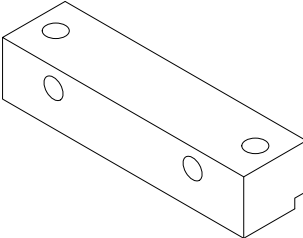
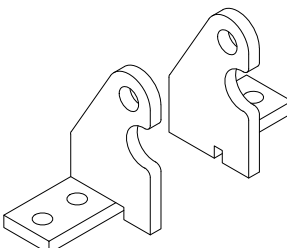



ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour
	ACUN3612 Surface Activator (1L)	1	Each		MF SA KL HP SSC SMC W Z PC
	ACUN3616 ACUN3610 Backing Rod	20	m	EHE200N EHE201 EHE202N ACUN3610	MF SA KL HP SSC SMC W Z PC
	ACVG956 Drill Jig	1	each	EHE200N EHE201 EHE202N	MF ✓ SA KL HP SSC SMC W Z PC
	HEA204 Cleat Pack Contains: Outside Cleat x 4 Inside Cleat x 4 Screws x 16	1	pack	EHE206	MF ✓ SA KL HP SSC SMC W Z PC
	HEA206 Corner Chevron	8	pack	EHE200N EHE201 EHE202N	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
	HEA207 Cleat Pack Contains: Outside Cleat x 4 Inside Cleat x 4 Screws x 24	1	pack	EHE200N EHE201 EHE202N	MF <input checked="" type="checkbox"/>
					SA <input type="checkbox"/>
	HEA209 Cleat Pack Contains: Cleat x 4 Mechanical Blocks x 8	4	pack	UTL049	MF <input checked="" type="checkbox"/>
					SA <input type="checkbox"/>
	HEA210 EHE230 Support Bracket	2	pack	EHE200N EHE230 HEA211	MF <input checked="" type="checkbox"/>
					SA <input type="checkbox"/>
	HEA211 EHE230 Fixing Bracket	2	pack	EHE200N EHE230 HEA210	MF <input checked="" type="checkbox"/>
					SA <input type="checkbox"/>
	HEA213 Drill Jig	1	each	EHE230	MF <input checked="" type="checkbox"/>
					SA <input type="checkbox"/>
 <p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p> <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			

ACCESSORIES : PHOTOS & DRAWINGS

Image	Part Code	Pack	Unit	Application	Colour	
	HEA214 Drill Jig	1	each	EHE200N	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	HEA250 Opening Rooflight Hinges 25kg limit per hinge.	1	each	EHE200N EHE206 ACVS042	MF	✓
					SA	
					KL	✓
					HP	
					SSC	
					SMC	
					W	✓
					Z	✓
					PC	
	HEA254 Chain Bracket	1	each	EHE200N HEA255	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	HEA255 HEA254 Fixing Bracket	1	each	EHE200N HEA254	MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	HEA256 Stainless Steel Actuator Brackets	1	pair	EHE206 ACVS042	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

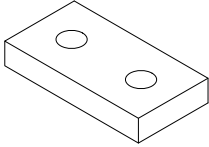
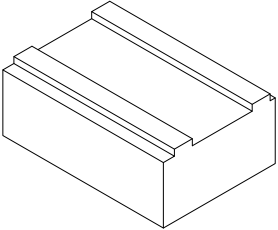
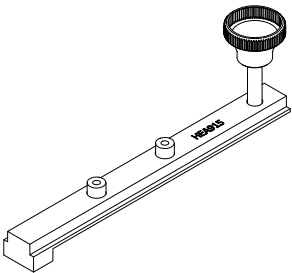
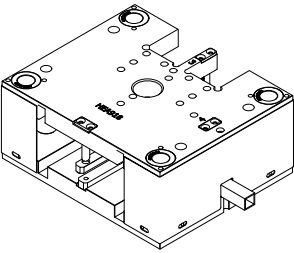
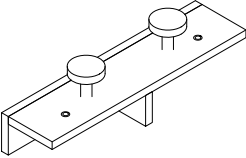


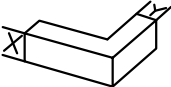
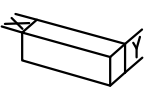
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	HEA257 M5 Fixing Plate	1	pair	EHE206 HEA256	MF SA KL HP SSC SMC W Z PC
	HEA290 Contour Block	1	pair	EHE200 EHE202	MF ✓ SA KL HP SSC SMC W Z PC
	HEA915 EHE206 Corner Drill Jig	1	each	EHE206 HEA204	MF SA KL HP SSC SMC W Z PC
	HEA918 Punch Tool	1	each	EHE200N EHE201 EHE202N UTL049	MF ✓ SA KL HP SSC SMC W Z PC
	HEA919 External Cleat Drill Jig	1	each	EHE200N EHE201 EHE202N HEA207 HEA212	MF SA KL HP SSC SMC W Z PC
 <p>T-BARS ACVG66=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p>  <p>Screw (Grub)</p>	<p>MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome</p>	<p>W = White Z = Black</p>	 		








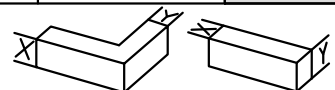
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	ACMX09700 Alu. Polish	1	each		MF	✓
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09761 Maxi Gloss	1	each		MF	
					SA	
					KL	
					HP	
					SSC	
					SMC	
					W	
					Z	
					PC	
	ACMX09762 Alu. Bright	1	each		MF	
					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 SA 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
 <p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p>  <p>Screw (Grub)</p>	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome	W = White Z = Black			








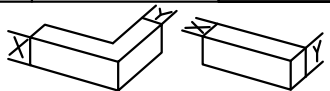



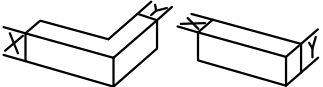
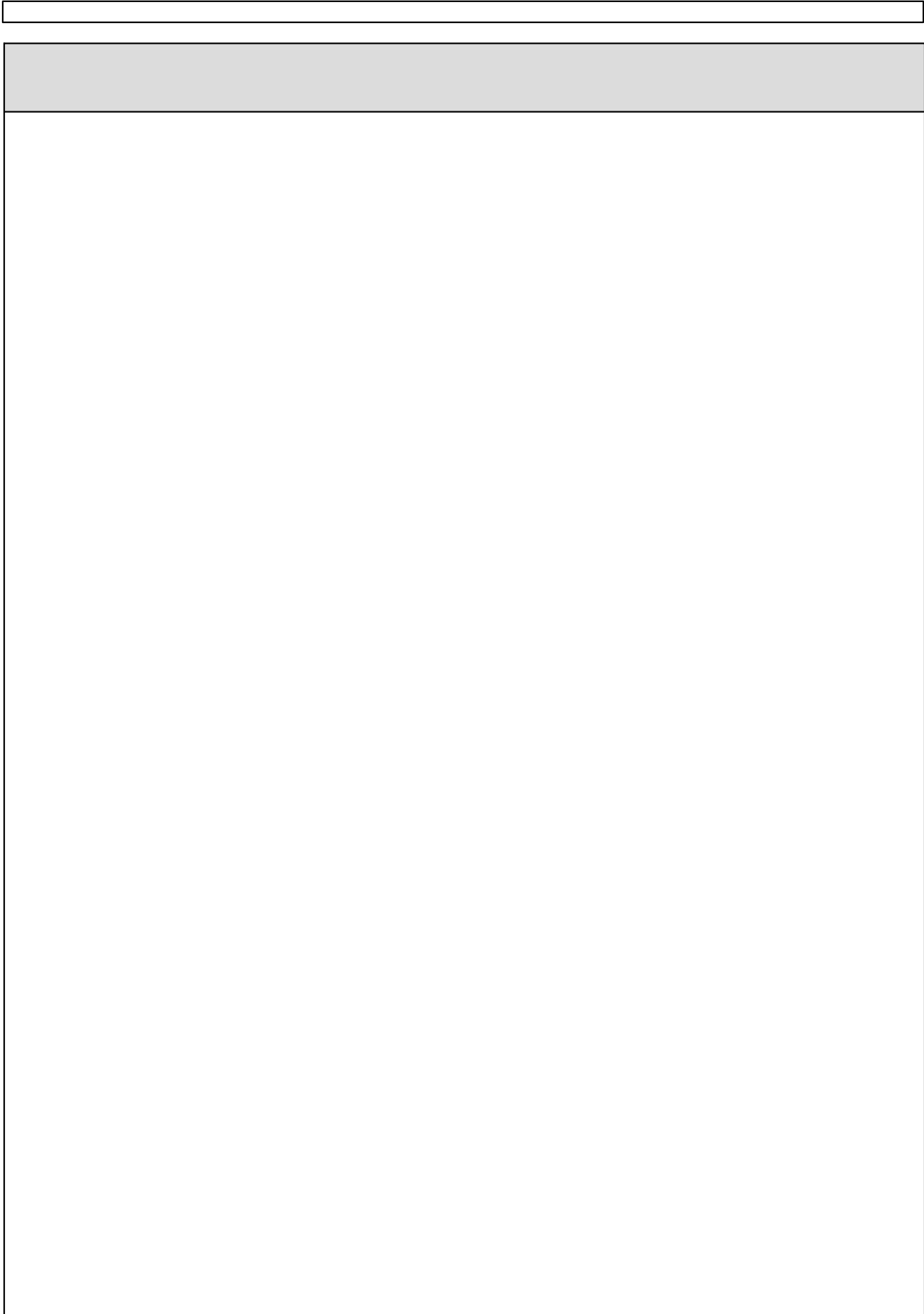
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	ACMX09803 Protective Tape 100mm	1	each		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL		HP		SSC		SMC		W		Z		PC	
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SA																							
KL																							
HP																							
SSC																							
SMC																							
W																							
Z																							
PC																							
	ACMX09830 Rubber Sealant	1	each		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL		HP		SSC		SMC		W		Z		PC	
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HP																							
SSC																							
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	ACSIL04 Sealing Glue Order with suffix of KL colour (eg.ACSIL04KL005) or BL=Black/WP=White/ CL=Clear	1	each		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td>✓</td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td>✓</td></tr> <tr><td>Z</td><td>✓</td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL	✓	HP		SSC		SMC		W	✓	Z	✓	PC	
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SA																							
KL	✓																						
HP																							
SSC																							
SMC																							
W	✓																						
Z	✓																						
PC																							
	ACSIL08 Silicon Gun	1	each		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL		HP		SSC		SMC		W		Z		PC	
MF																							
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SSC																							
SMC																							
W																							
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	ACSIL013 Glue for Mitre	1	each		<table border="1"> <tr><td>MF</td><td></td></tr> <tr><td>SA</td><td></td></tr> <tr><td>KL</td><td></td></tr> <tr><td>HP</td><td></td></tr> <tr><td>SSC</td><td></td></tr> <tr><td>SMC</td><td></td></tr> <tr><td>W</td><td></td></tr> <tr><td>Z</td><td></td></tr> <tr><td>PC</td><td></td></tr> </table>	MF		SA		KL		HP		SSC		SMC		W		Z		PC	
MF																							
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 <p>T-BARS ACVG65=2.5mm ACVG66=3.0mm ACVL150=4.0mm</p>  <p>Screw (Grub)</p>	<p>MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome</p>	<p>W = White Z = Black</p>																					

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					KL <input type="checkbox"/>
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					SSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					PC <input type="checkbox"/>
	ACUN3900 Gasket Roller	1	each		MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					SSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					PC <input type="checkbox"/>
					MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					SSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					PC <input type="checkbox"/>
					MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					SSC <input type="checkbox"/>
					SMC <input type="checkbox"/>
					W <input type="checkbox"/>
					Z <input type="checkbox"/>
					PC <input type="checkbox"/>
	MF = Mill Finish SA = Silver Anodised KL = Basic Colour HP = Special Colour SSC = Smooth Satin Chrome SMC = Smokey Chrome PC = Polished Chrome				MF <input type="checkbox"/>
					SA <input type="checkbox"/>
					KL <input type="checkbox"/>
					HP <input type="checkbox"/>
					SSC <input type="checkbox"/>
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					Z <input type="checkbox"/>
					PC <input type="checkbox"/>
		W = White Z = Black			

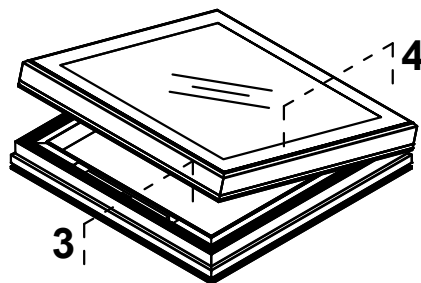
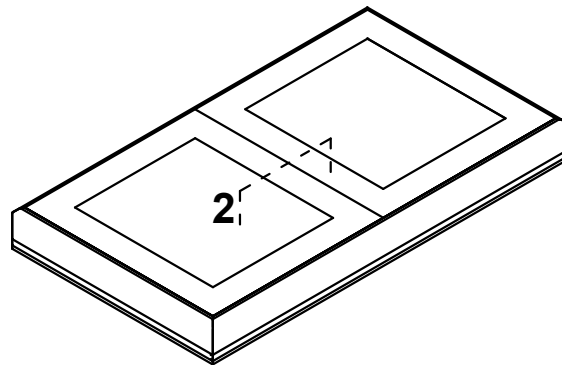
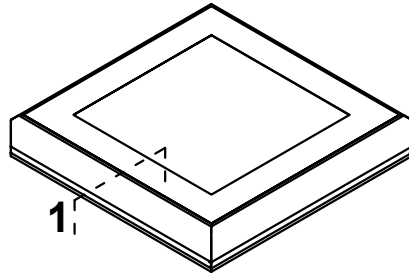
Section C

Sections

Scale Elevations

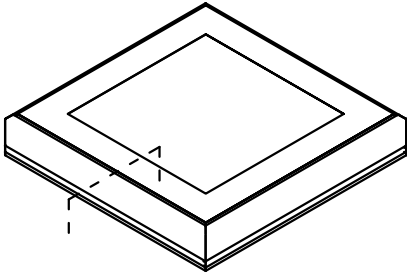


Sections

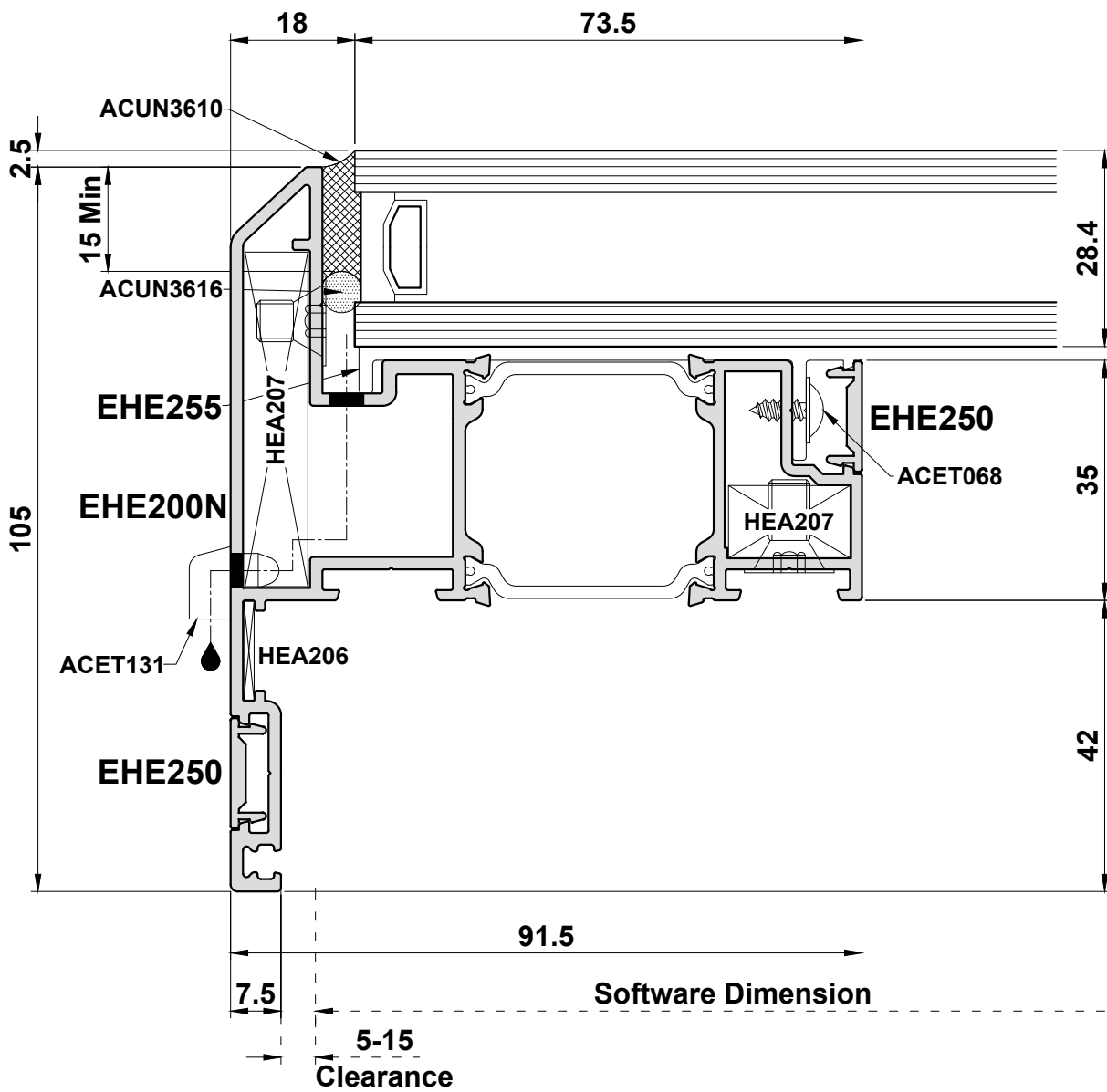


Do Not Scale From This Drawing

Detail 1A

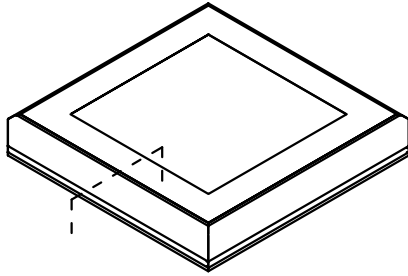


Note: A minimum of 15mm depth of ACUN3610 shall be used sealing glass to outer frame.

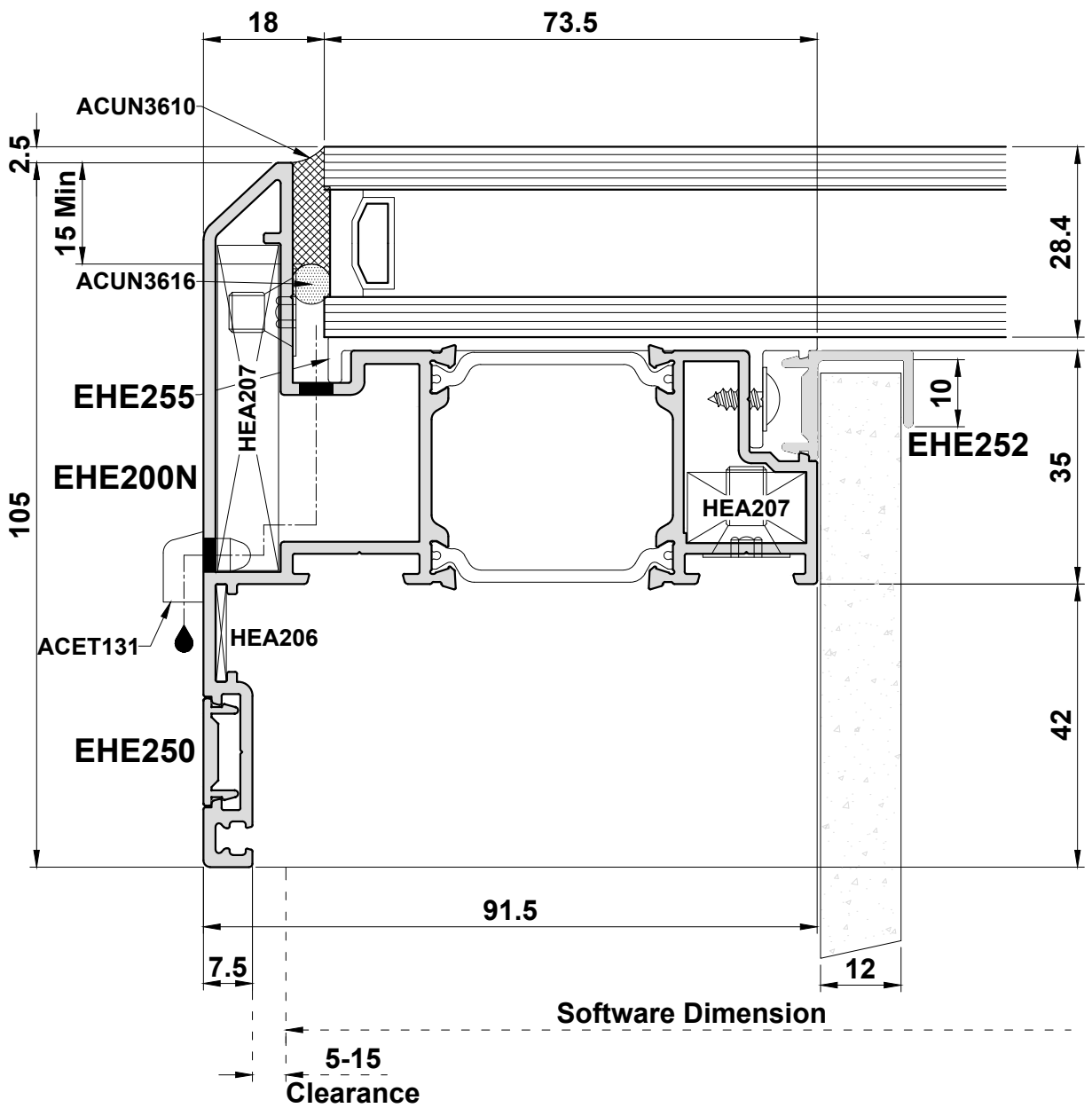


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Detail 1B

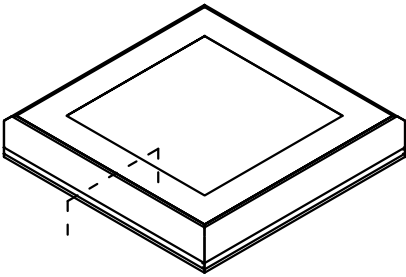


Note: A minimum of 15mm depth of ACUN3610 shall be used sealing glass to outer frame.

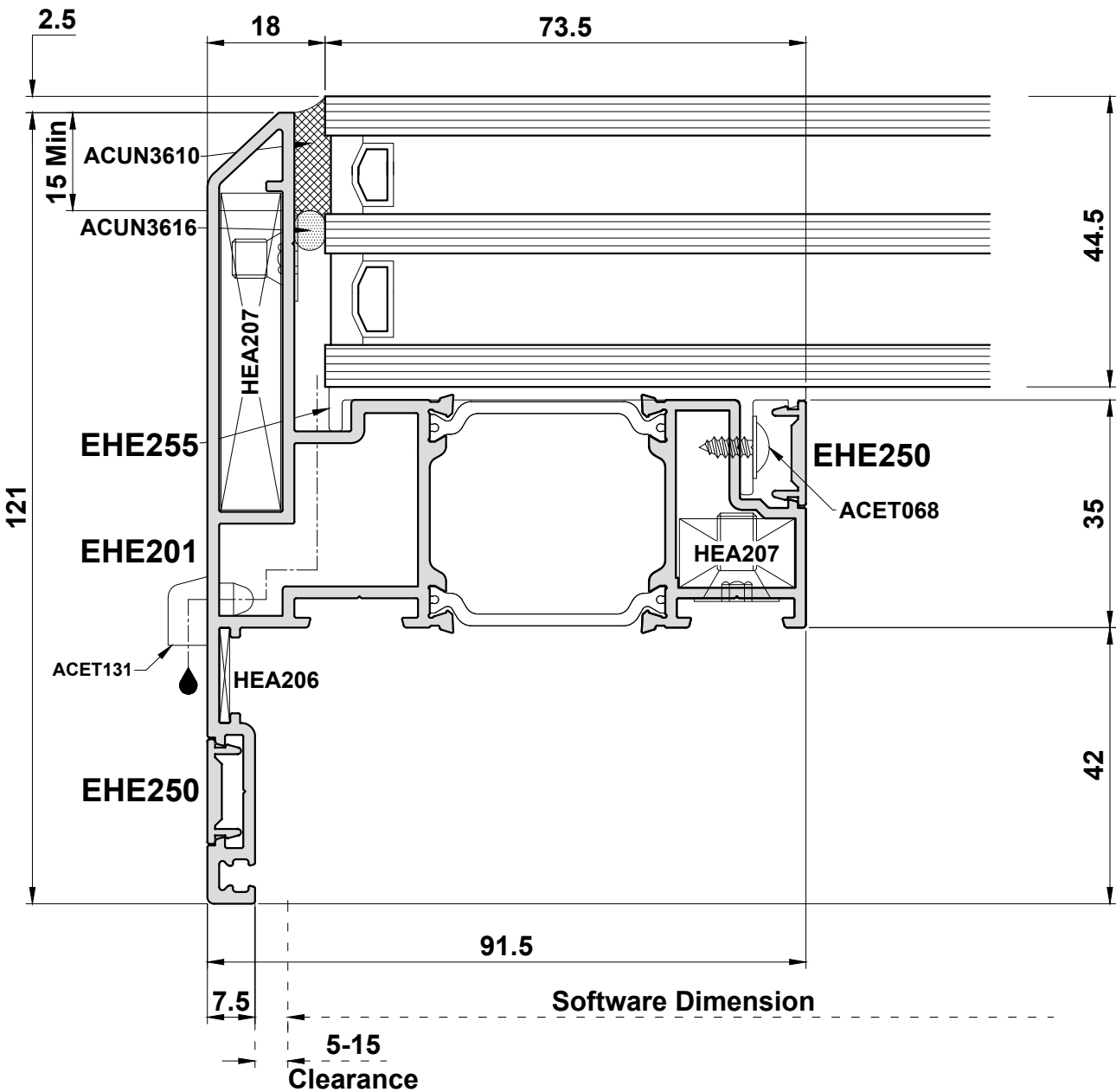


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Detail 1C

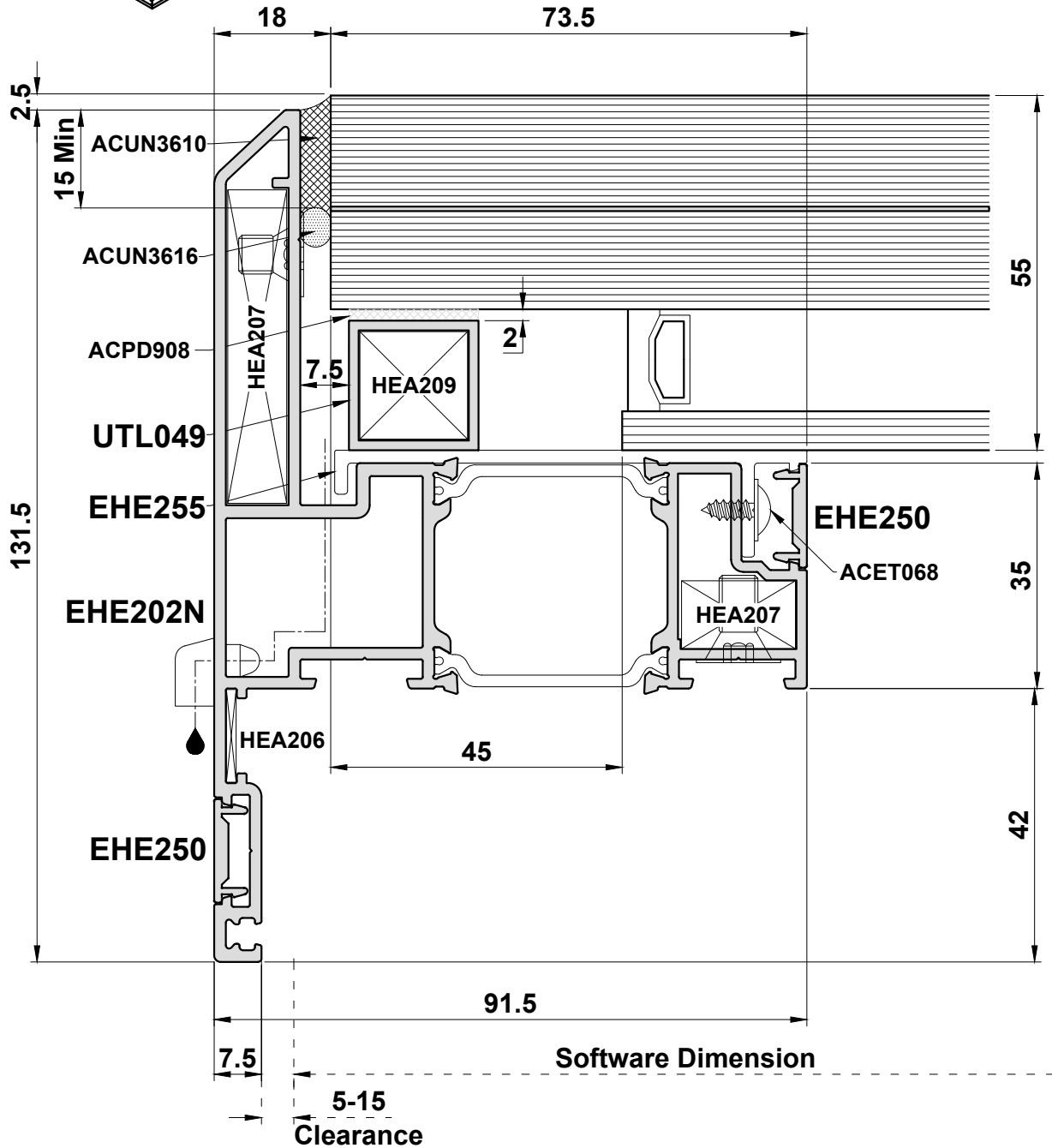
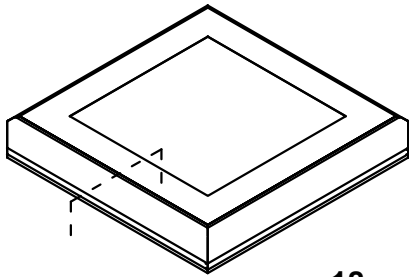


Note: A minimum of 15mm depth of ACUN3610 shall be used sealing glass to outer frame.



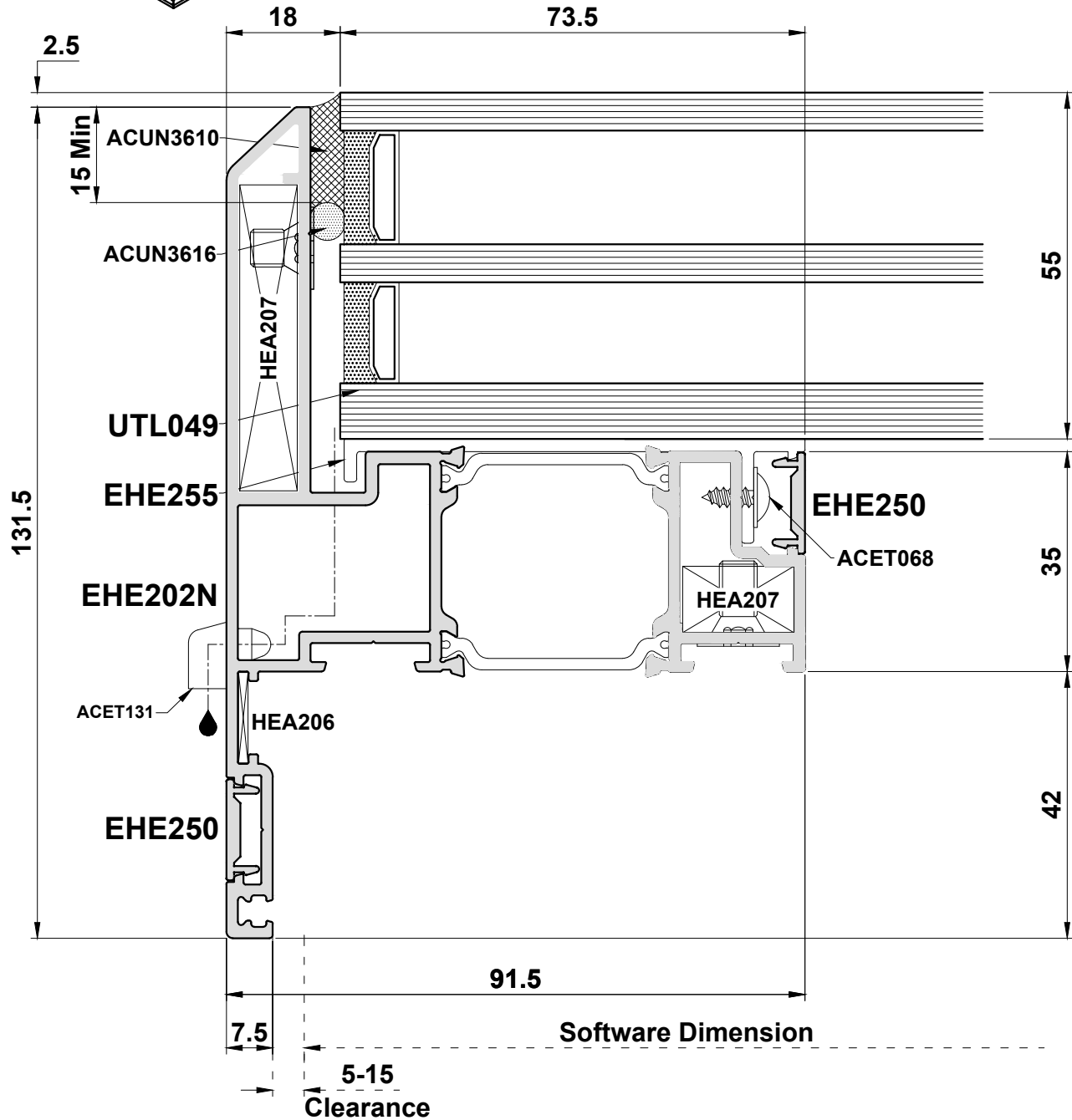
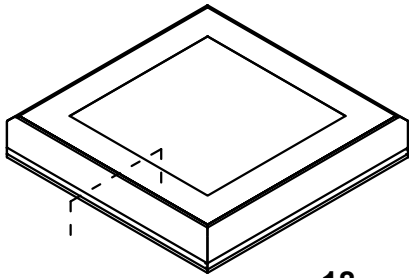
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Detail 1D



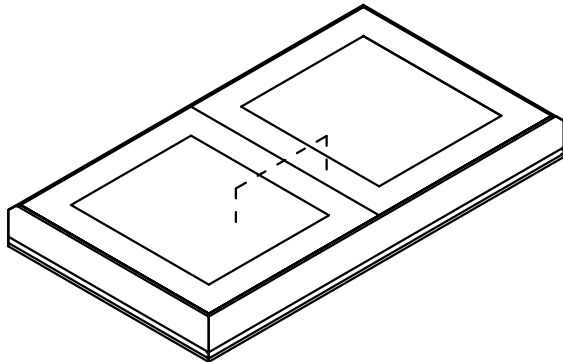
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Detail 1E

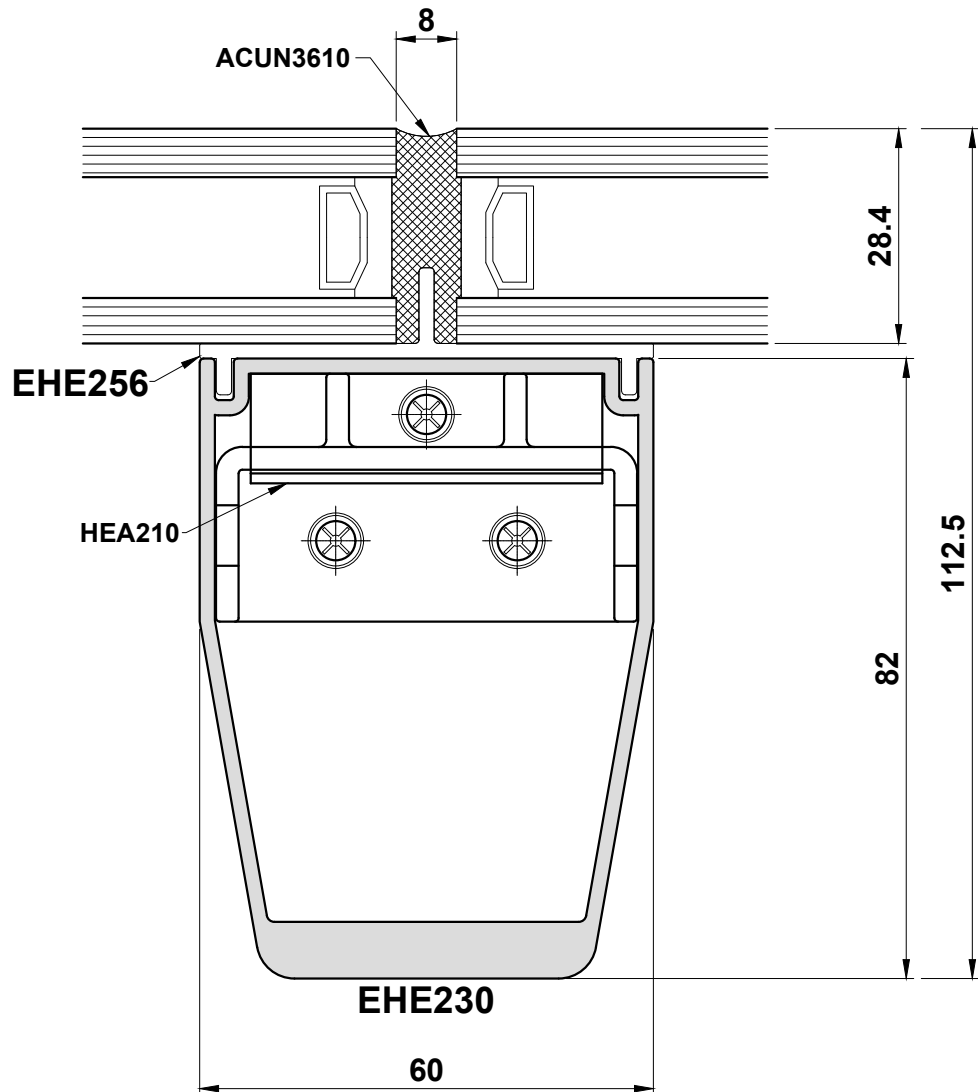


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Detail 2

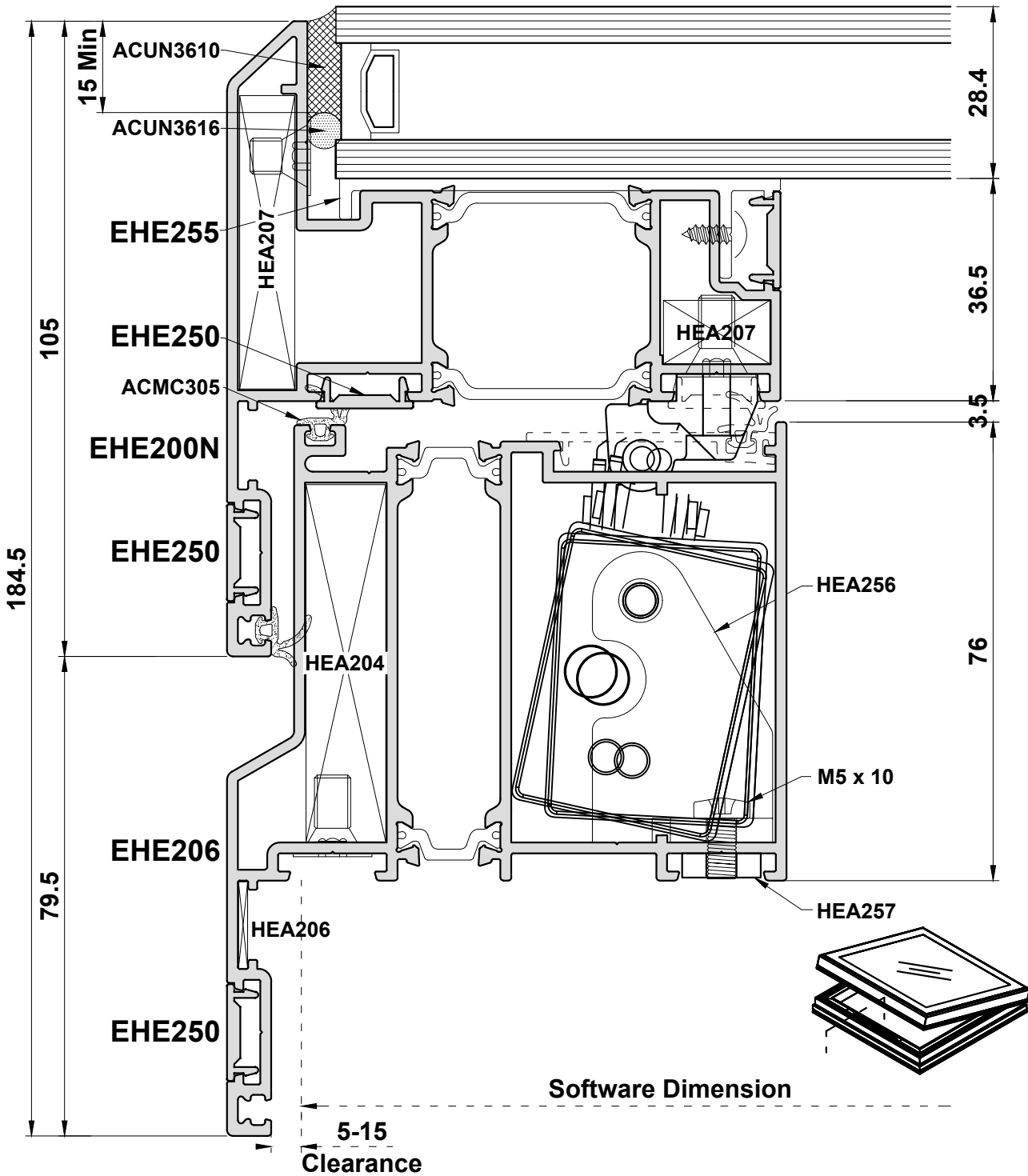


Note: A minimum of 15mm depth of ACUN3610 shall be used sealing glass



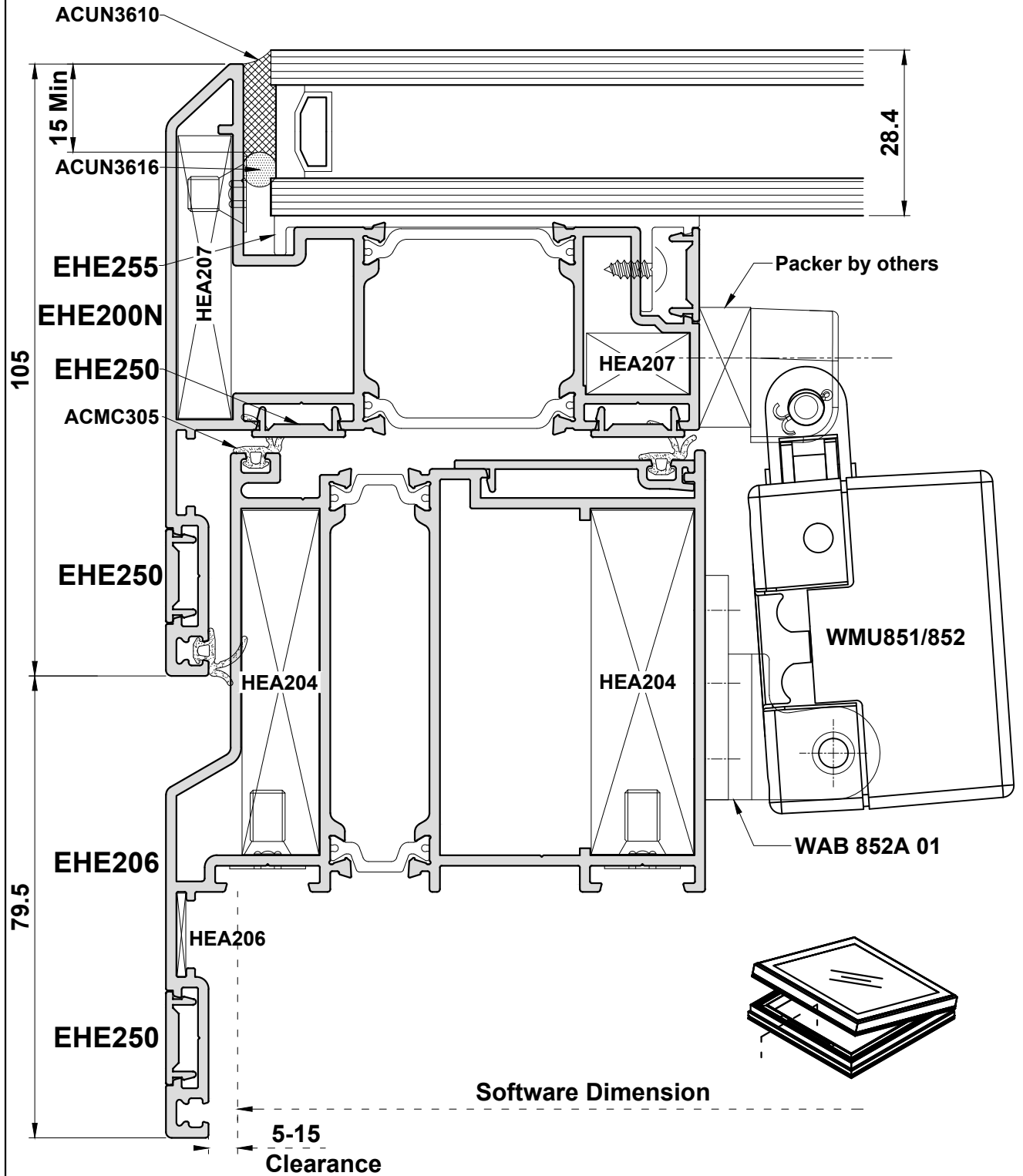
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Detail 3A



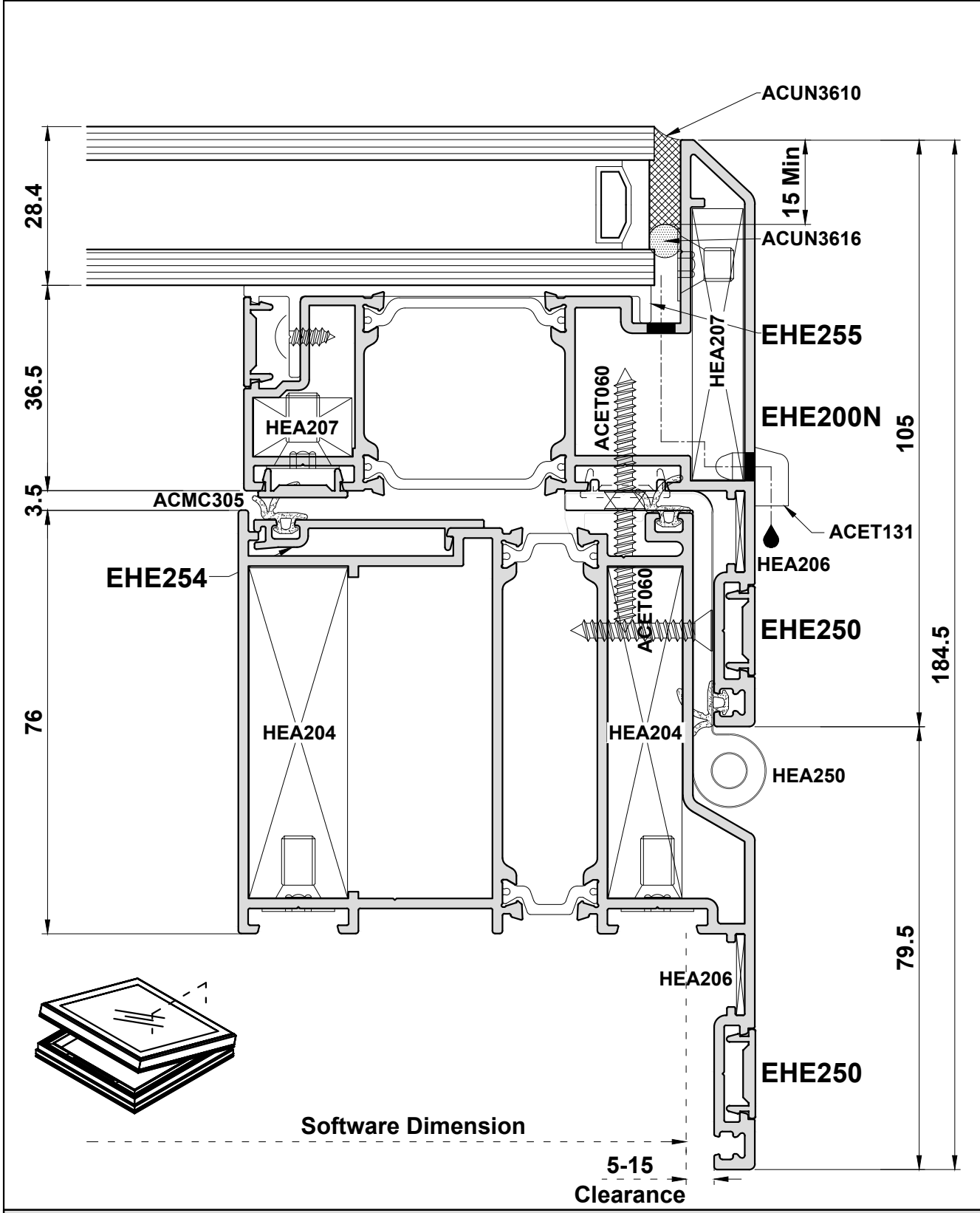
Do Not Scale From This Drawing

Detail 3B



Do Not Scale From This Drawing

Detail 4



Do Not Scale From This Drawing

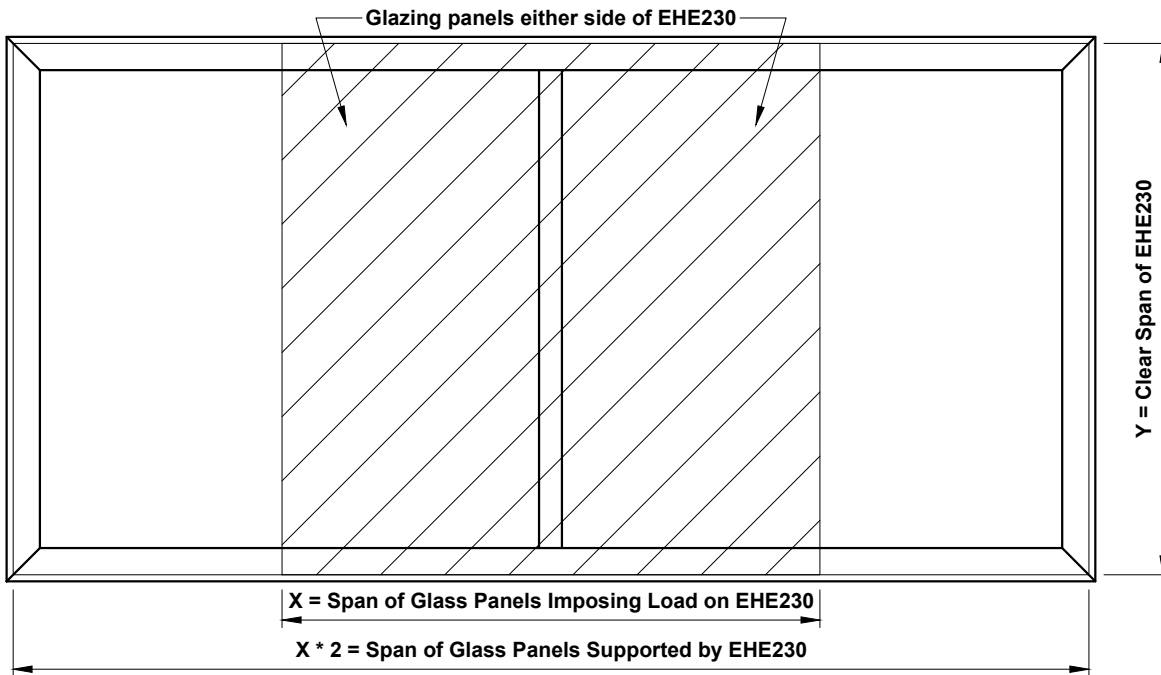
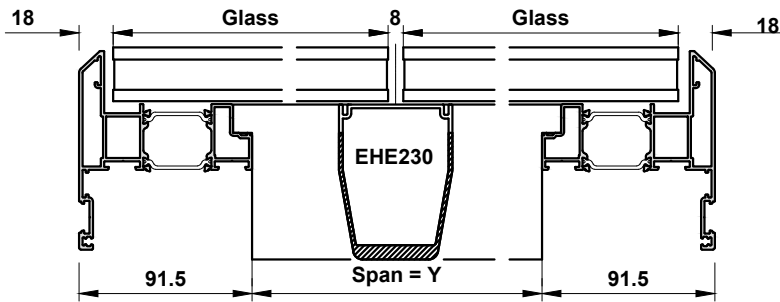
Section D

Statics

General Size Limitations are shown on Page A03.

**For Wind Loading Limitations, Please Contact
The Technical Department - T: 01934 876100**

Section D



EHE230 Span	Maximum Glass Sizes	
Y (mm)	X (mm)	X * 2 (mm)
<1800	3175	6350
1801-1900	2800	5600
1901-2000	2400	4800
2001-2100	2100	4200
2101-2200	1850	3700
2201-2300	1625	3250
2301-2400	1420	2840
2401-2500	1260	2520
2501-2600	1130	2260
2601-2700	1000	2000
2701-2800	900	1800
2801-2900	800	1600
2901-3000	700	1400

Important Notes:

1. Deflection limited to L/175
2. The above limits are for EHE230 only. The glazing unit design limits must be confirmed by others.
3. The adjacent rooflight glazing is securely fixed around the perimeter as specified in this manual.
4. Loading consistent design parameters:
 - a) The maximum potential loading case is dead (0.35kN/m²) + imposed (0.75kN/m²) (therefore wind uplift is not covered).
 - b) Dead load is from 6.8mm laminate + 6mm toughened glazing = 0.35kN/m².
 - c) Maximum imposed (snow) load is 0.75kN/m².
 - d) Maximum aperture height above ground = 3m.
 - e) Maximum site altitude = 100m above ordinance datum
5. The Rooflight will be located within a flat roof with access maintenance only.

Section E

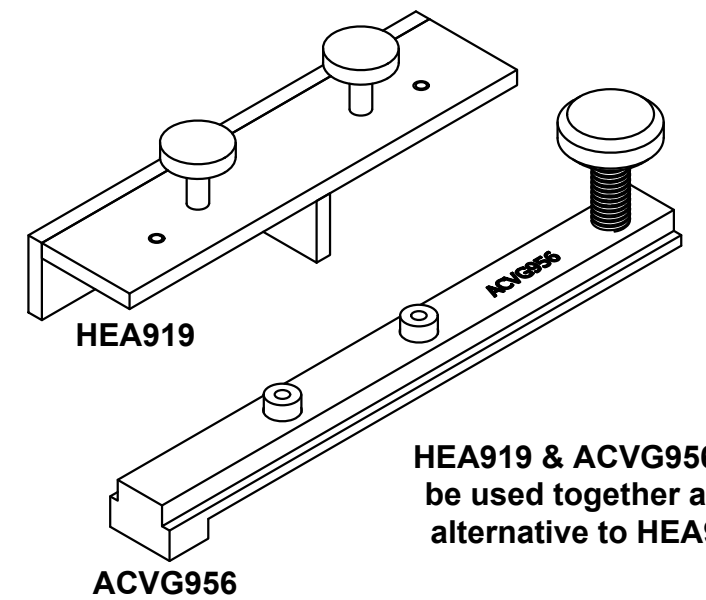
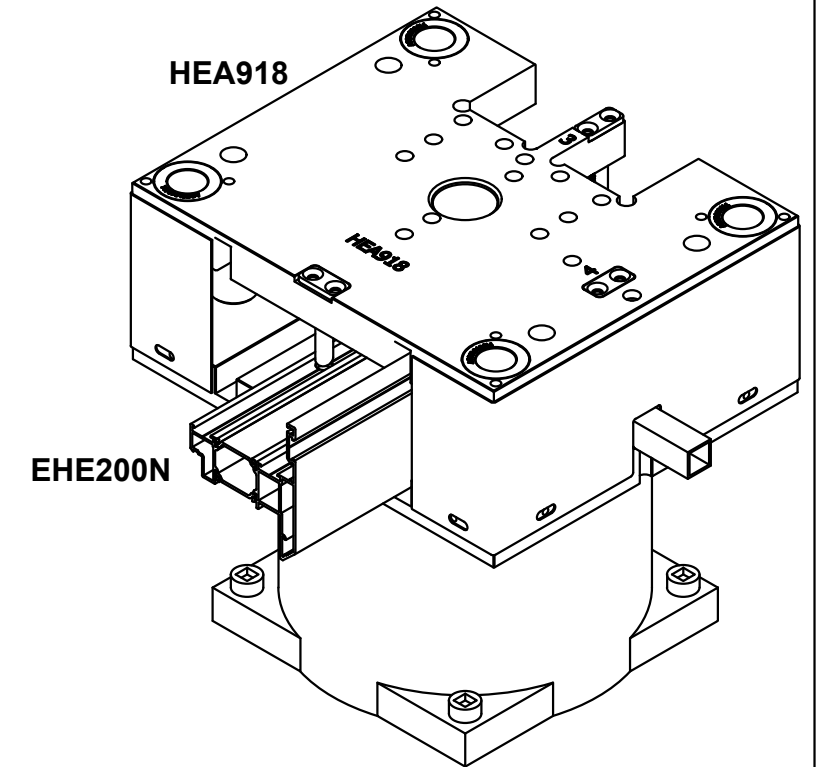
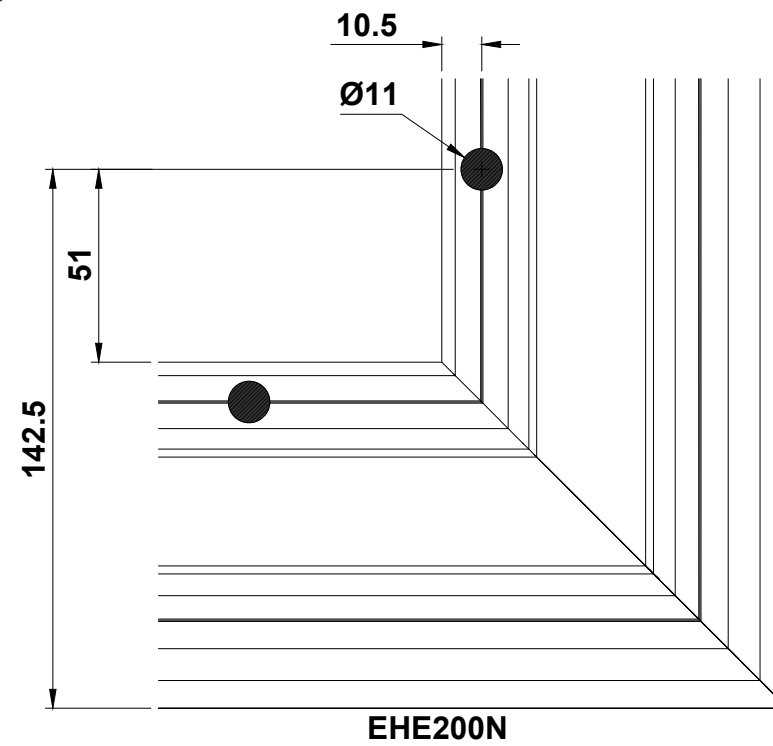
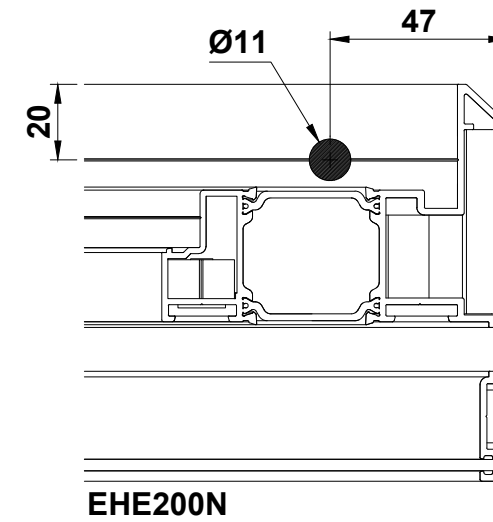
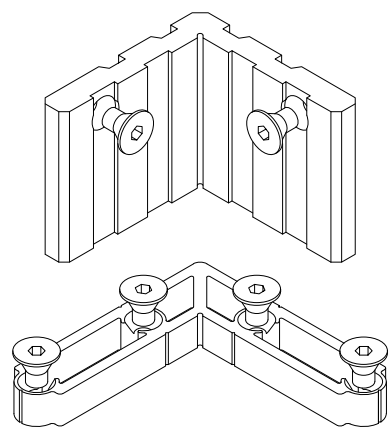
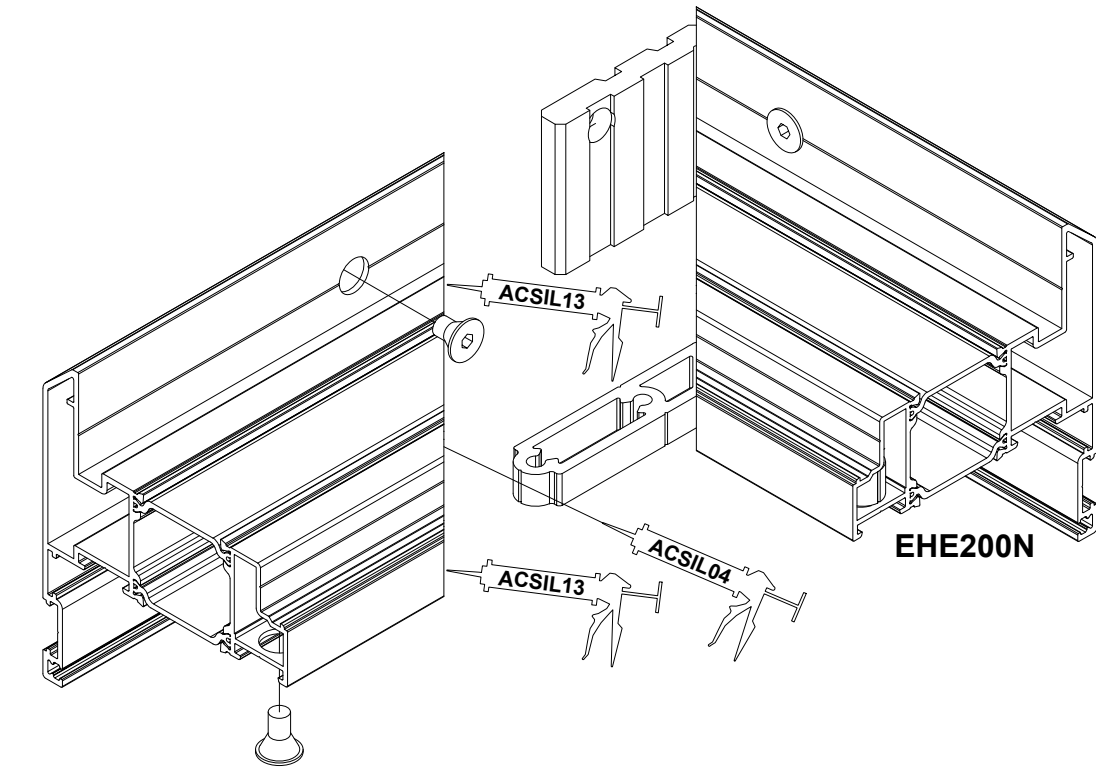


Construction Drawings

Corner Joint Details..... E03 - E04
Drainage Details..... E05
Sealing Glass Unit..... E06
Walk On Roof Assembly..... E07
Intermediate Mullion..... E08
Typical Installation Details..... E09
Kerb Sizes..... E10 - E11
Opening Vent Details..... E12 - E17



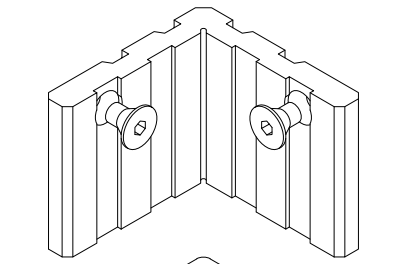
EHE200N Corner Joint Details



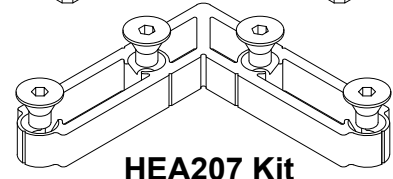
HEA919 & ACVG956 can be used together as an alternative to HEA918.

Do Not Scale From This Drawing

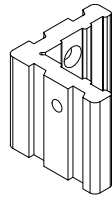
EHE201 & EHE202N Corner Joint Details



HEA207 Kit



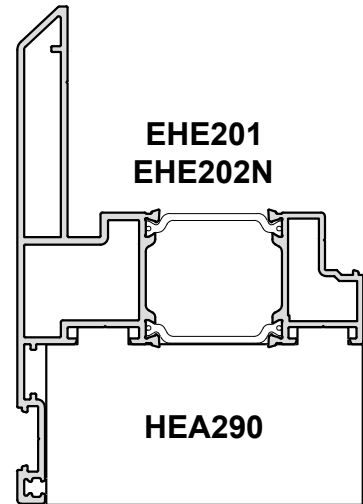
HEA207



HEA206

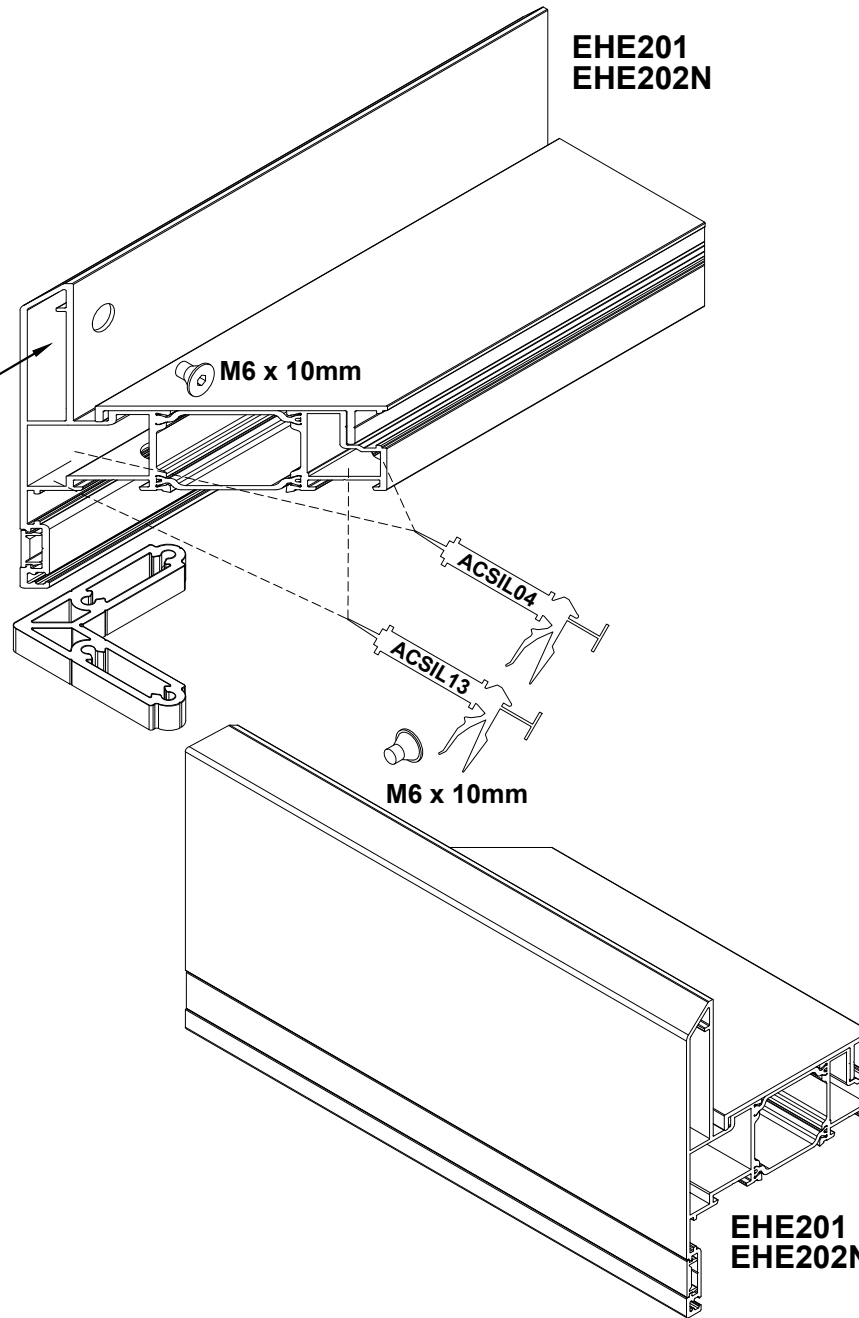


HEA290 Contour blocks are available to aid with cutting accurate mitres.



**EHE201
EHE202N**

HEA290



**EHE201
EHE202N**

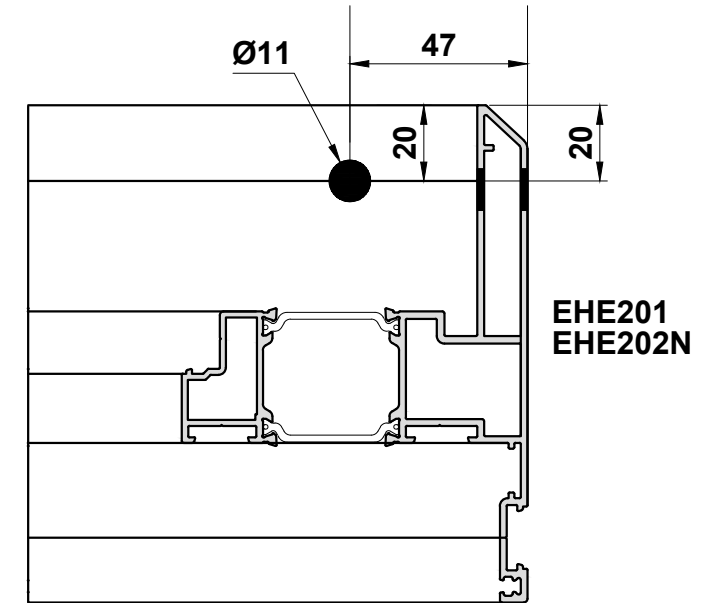
M6 x 10mm

ACSIL04

ACSIL13

M6 x 10mm

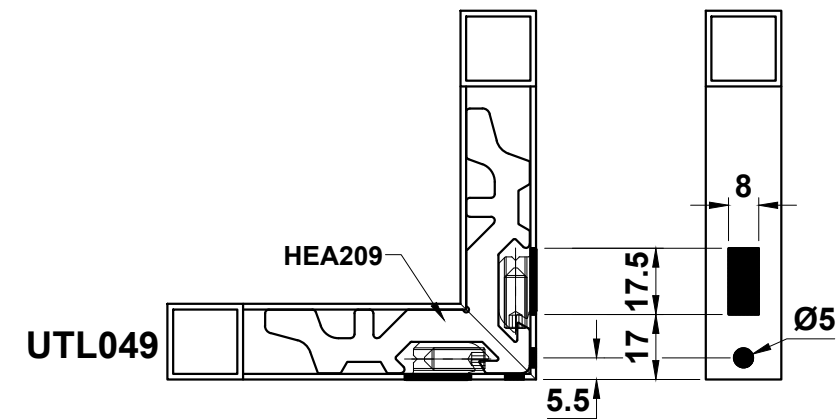
**EHE201
EHE202N**



**EHE201
EHE202N**

Note: HEA918 punch tool can be used

Note: HEA918 punch tool can be used



HEA209

UTL049

5.5

17

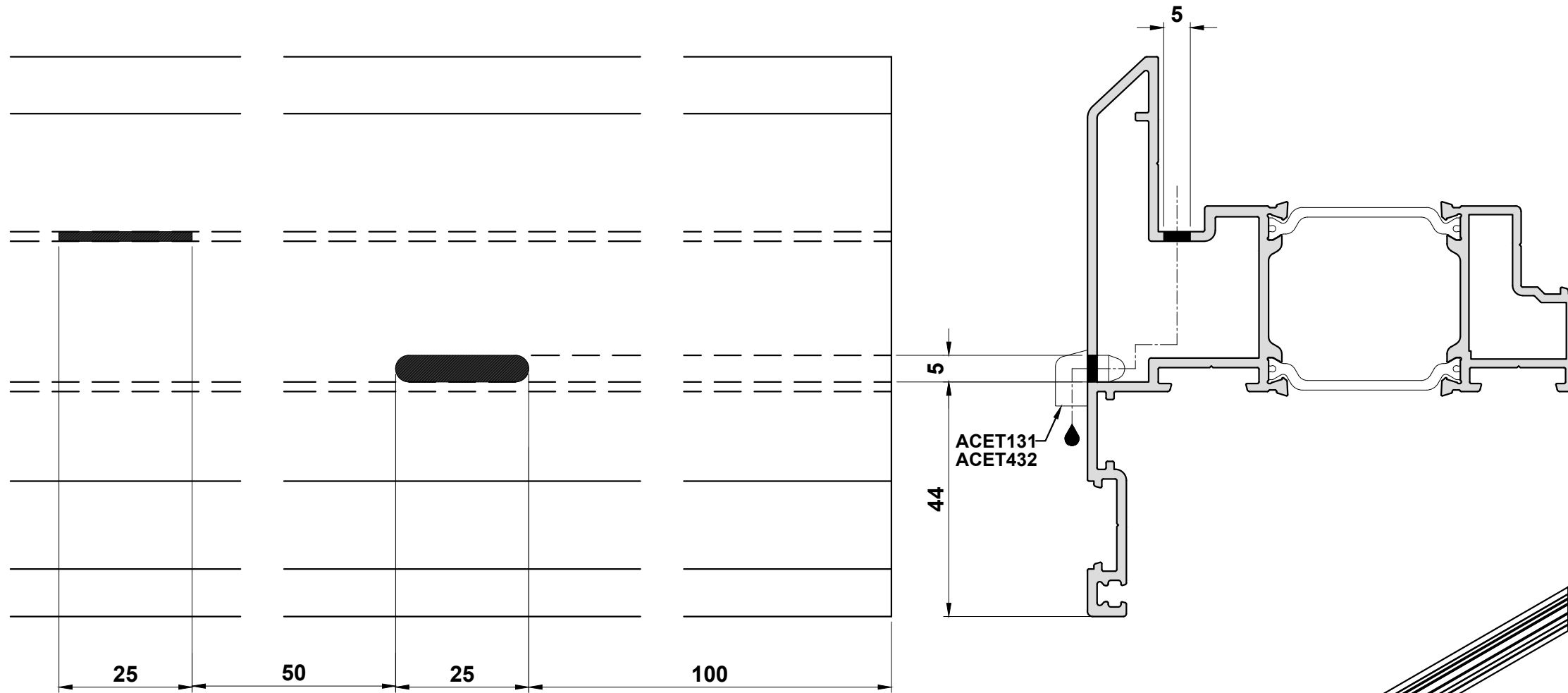
17.5

8

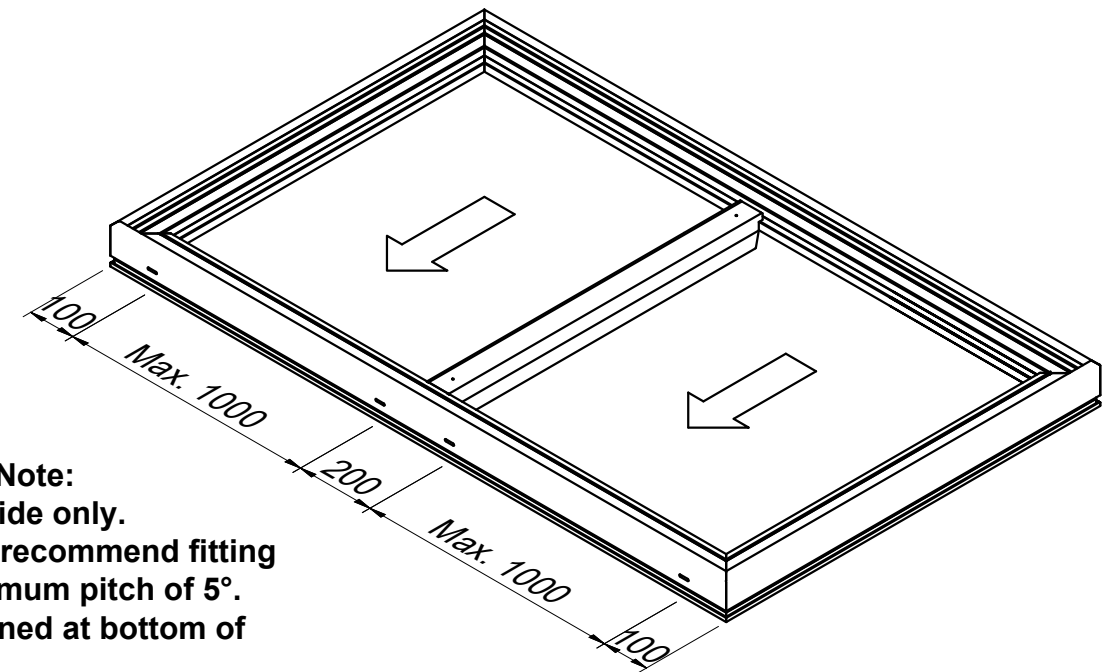
Ø5

Do Not Scale From This Drawing

Drainage Details



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



Important Note:
Drain to one side only.
To aid water run off, we recommend fitting the rooflight at a minimum pitch of 5°. Drainage to be positioned at bottom of pitch.

Do Not Scale From This Drawing

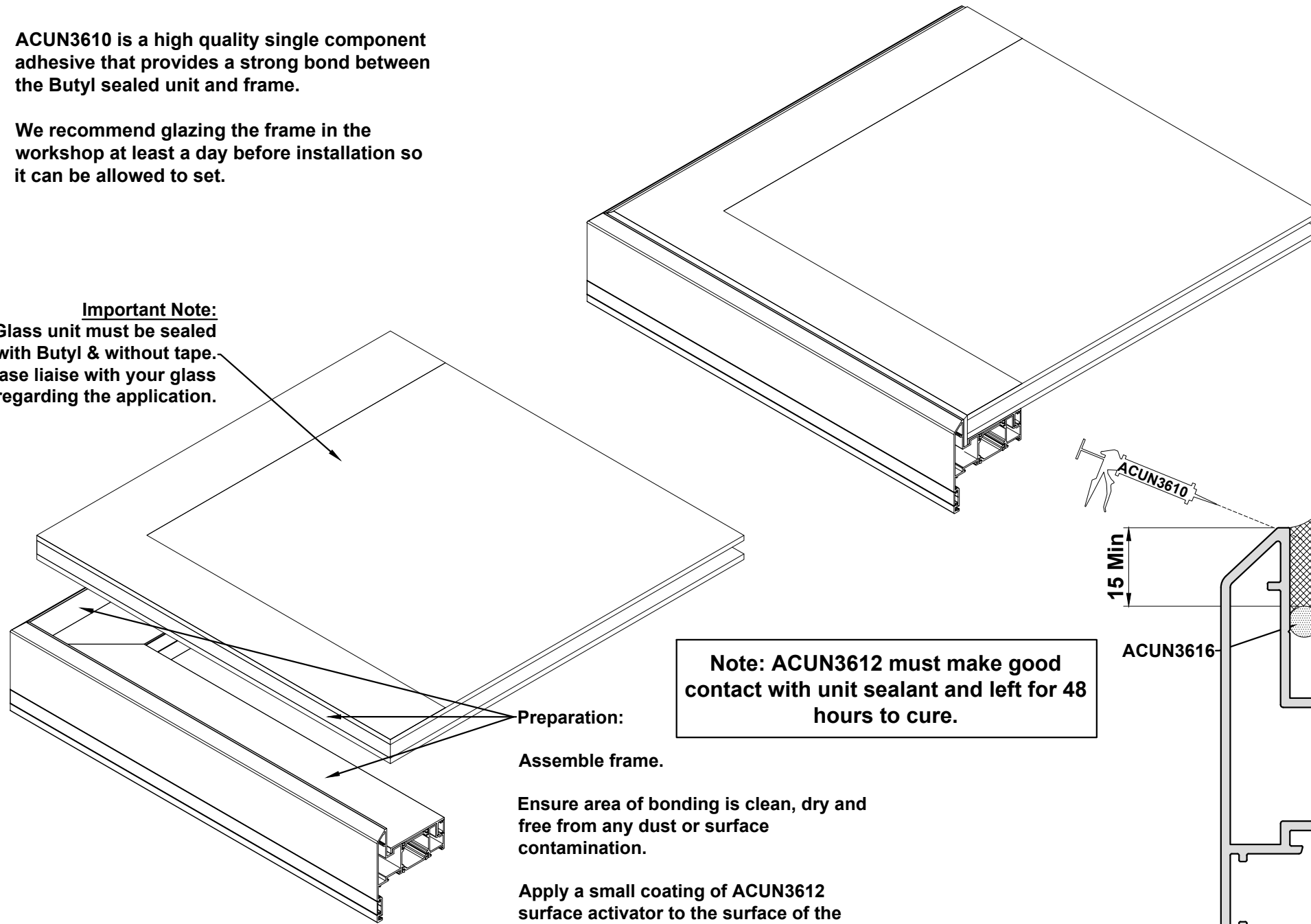
Sealing Glass Unit



ACUN3610 is a high quality single component adhesive that provides a strong bond between the Butyl sealed unit and frame.

We recommend glazing the frame in the workshop at least a day before installation so it can be allowed to set.

Important Note:
Glass unit must be sealed with Butyl & without tape. Please liaise with your glass supplier regarding the application.



Preparation:

Assemble frame.

Ensure area of bonding is clean, dry and free from any dust or surface contamination.

Apply a small coating of ACUN3612 surface activator to the surface of the glass support and the bond area of the glass only. Allow to dry, leaving a slight residue.

Take care not to apply ACUN3612 to any visible surfaces.

Note: ACUN3612 must make good contact with unit sealant and left for 48 hours to cure.

Bonding:

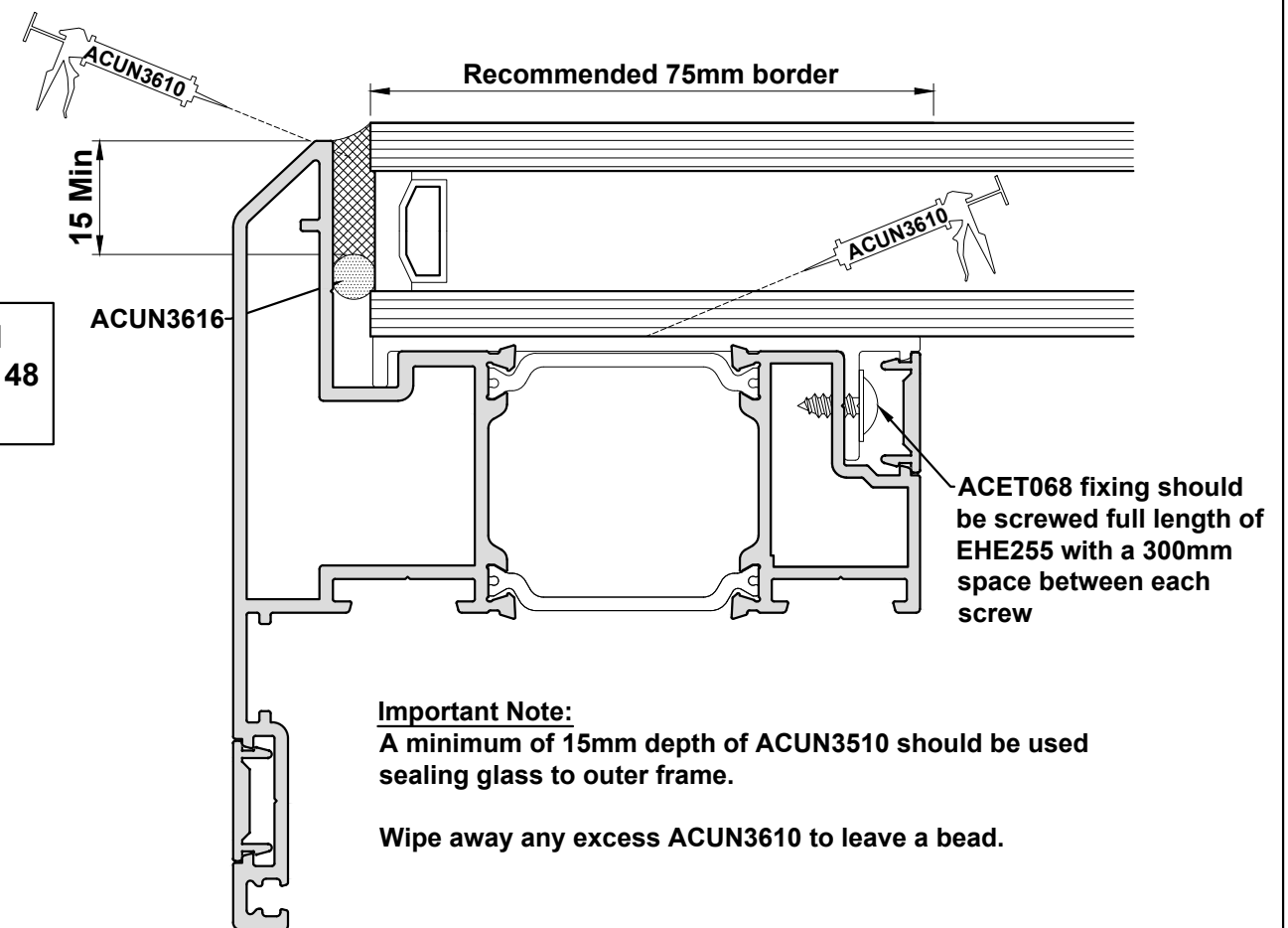
After preparation, apply a small, continuous bead of ACUN3610 single component sealant on top of the EHE255 glass support and place glass into position.

Apply ACUN3610 single component sealant into gap between frame and glass as detailed below (Detail A).

ACUN3610 must be applied to the entire perimeter of the unit.

A clamp should be used to ensure the glass is held flat while ACUN3610 sets.

Leave to set overnight.



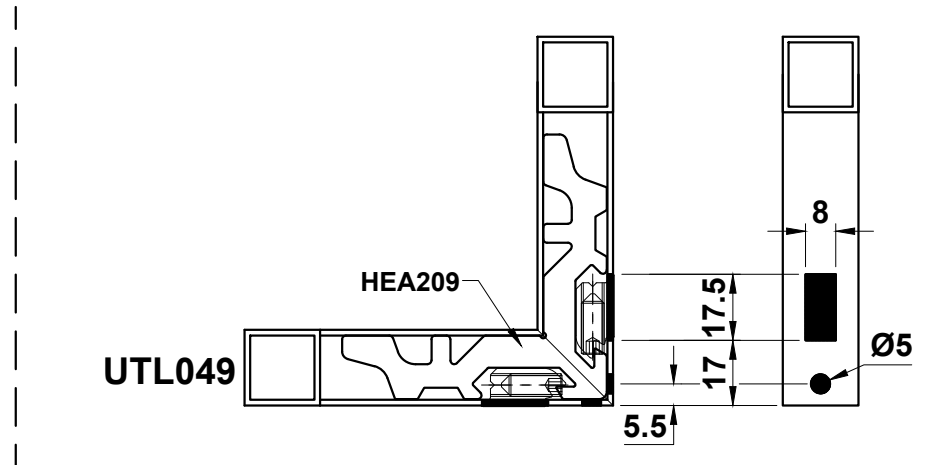
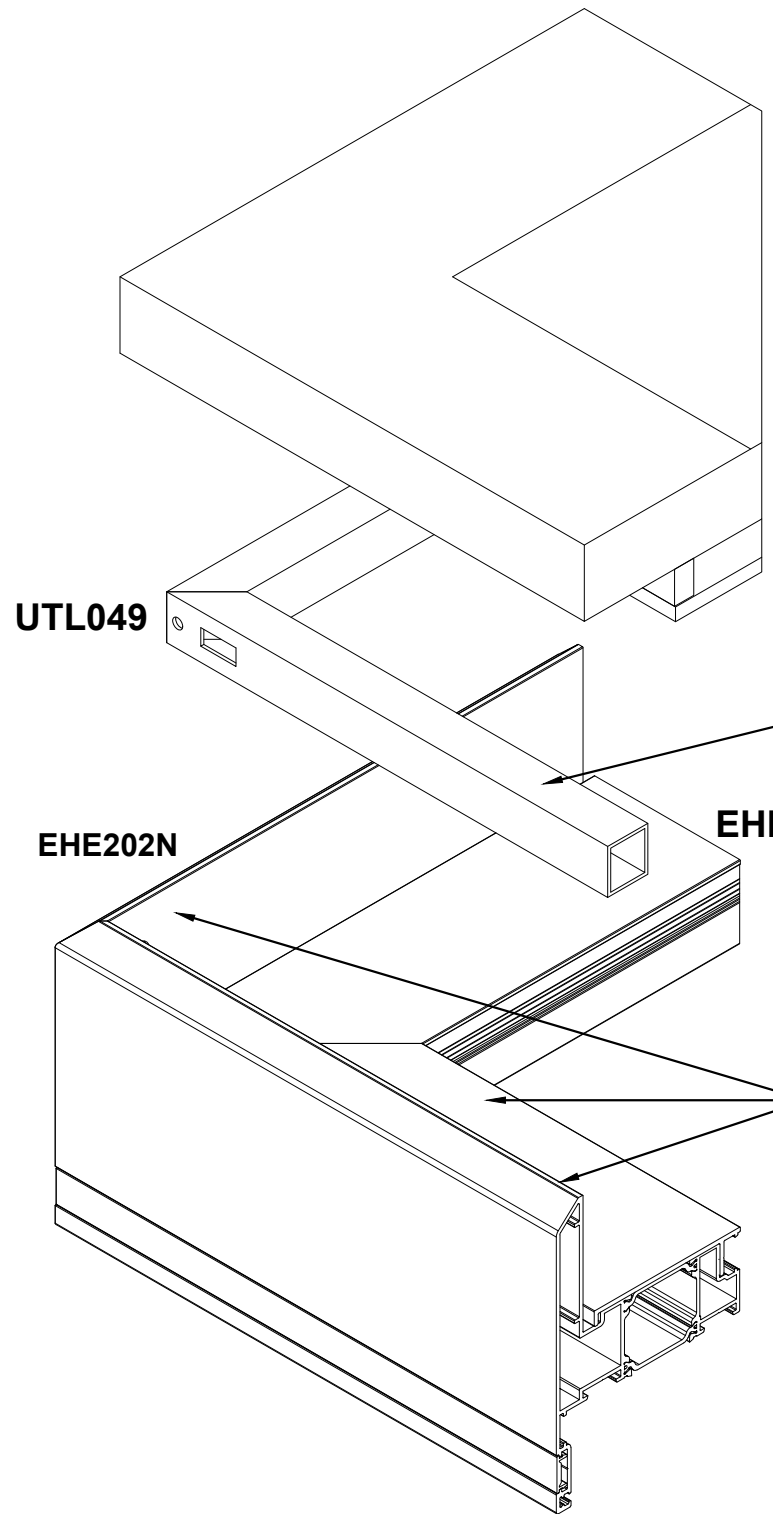
Important Note:
A minimum of 15mm depth of ACUN3510 should be used sealing glass to outer frame.

Wipe away any excess ACUN3610 to leave a bead.

ACET068 fixing should be screwed full length of EHE255 with a 300mm space between each screw

Do Not Scale From This Drawing

EHE202 Walk On Roof Assembly



Bonding:

After preparation, apply a small, continuous bead of ACUN3610 single component sealant on top of the EHE255 glass support and place glass into position.

Apply ACUN3610 single component sealant into gap between frame and glass as detailed below (Detail A).

ACUN3610 must be applied to the entire perimeter of the unit.

A clamp should be used to ensure the glass is held flat while ACUN3610 sets.

Leave to set overnight.

Apply ACPD908 tape to top side of UTL049 & bond to EHE255 using ACUN3610

Note: ACUN3612 must make good contact with unit sealant and left for 48 hours to cure.

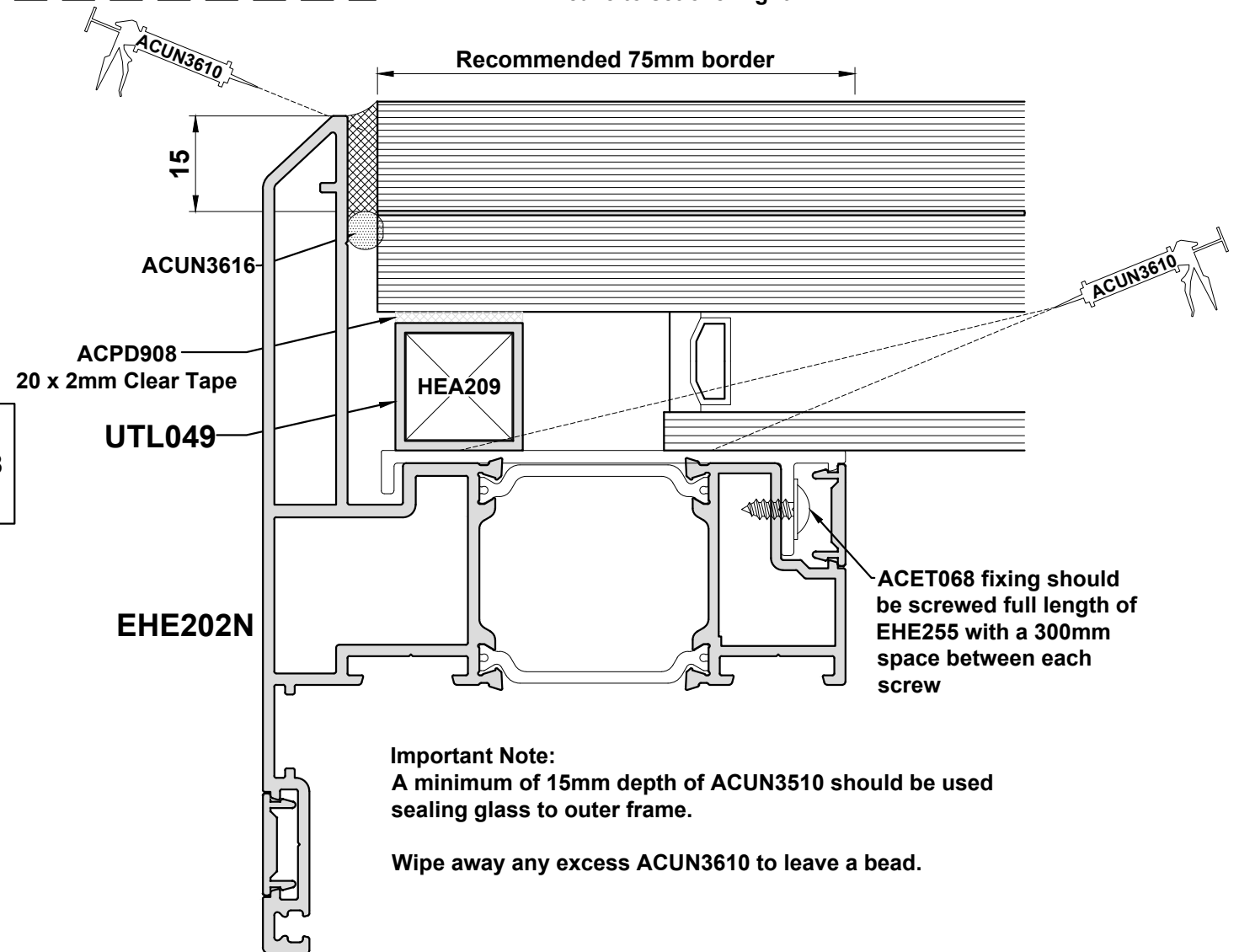
Preparation:

Assemble frame.

Ensure area of bonding is clean, dry and free from any dust or surface contamination.

Apply a small coating of ACUN3612 surface activator to the surface of the glass support and the bond area of the glass only. Allow to dry, leaving a slight residue.

Take care not to apply ACUN3612 to any visible surfaces.



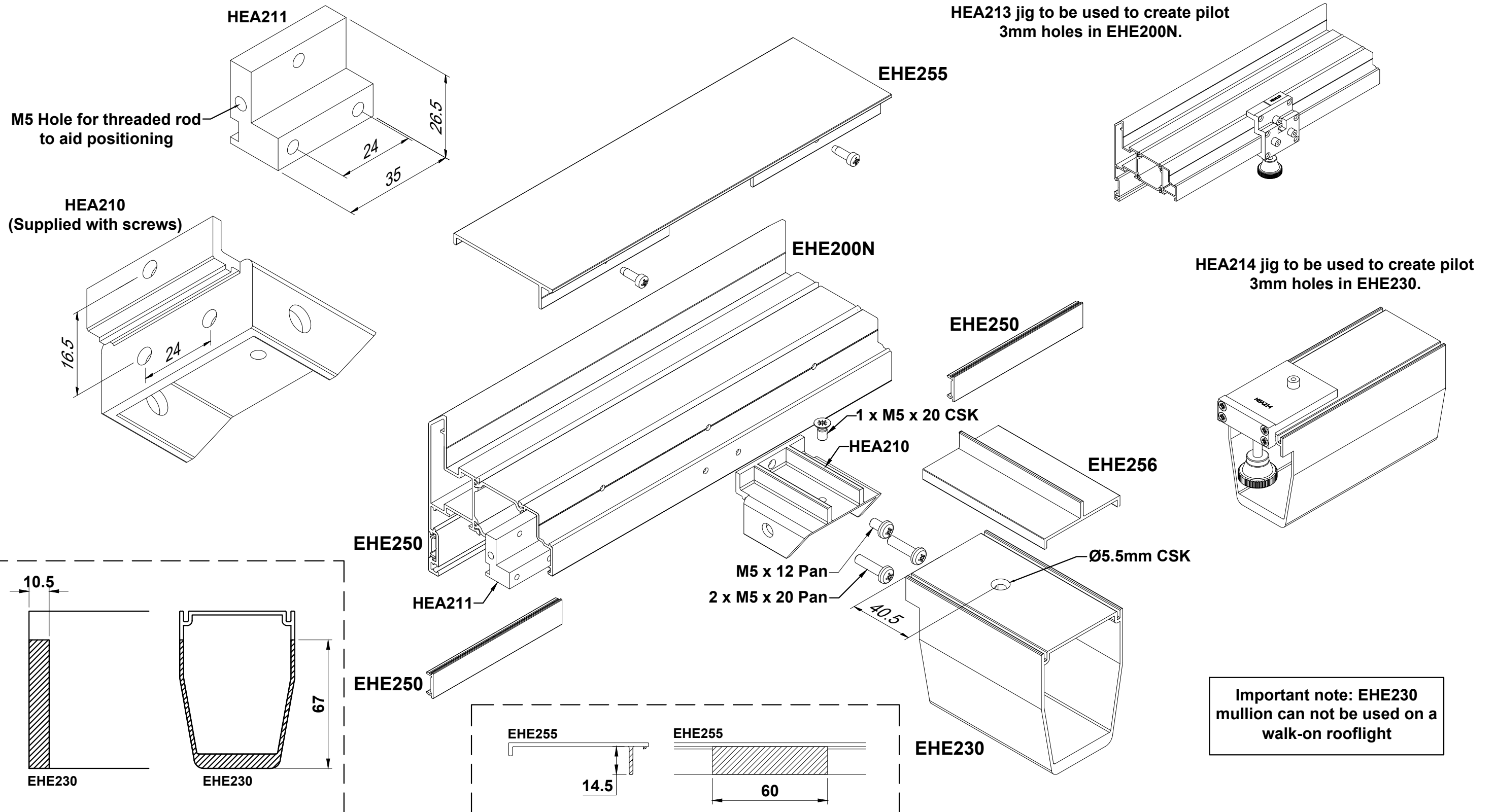
Important Note:

A minimum of 15mm depth of ACUN3510 should be used sealing glass to outer frame.

Wipe away any excess ACUN3610 to leave a bead.

Do Not Scale From This Drawing

Intermediate Mullion



Do Not Scale From This Drawing

Typical Installation Detail

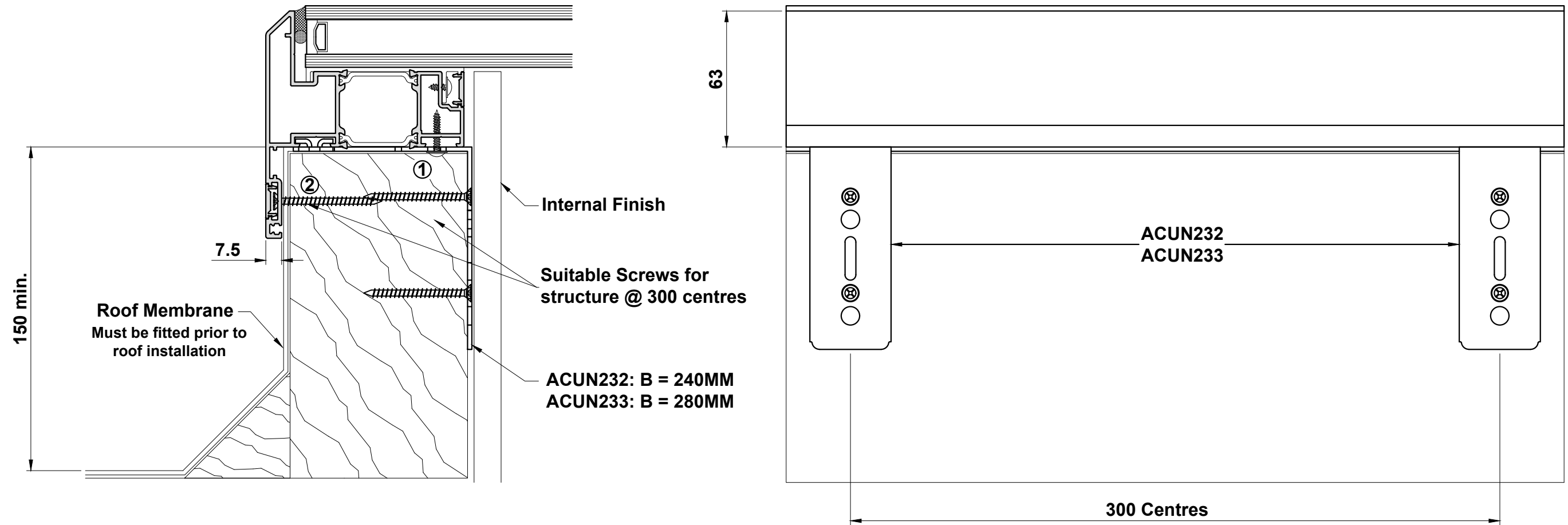
Methods of Fixing

1. Fix roof from inside using ACUN232 or ACUN233 fixing straps at 100mm from each corner and at 300mm max centres. This is the recommended option.
2. Fix roof from the outside using anti-tamper screws suitable for the building substrate 100mm in from each end then at 300mm max centres.

Important Note:

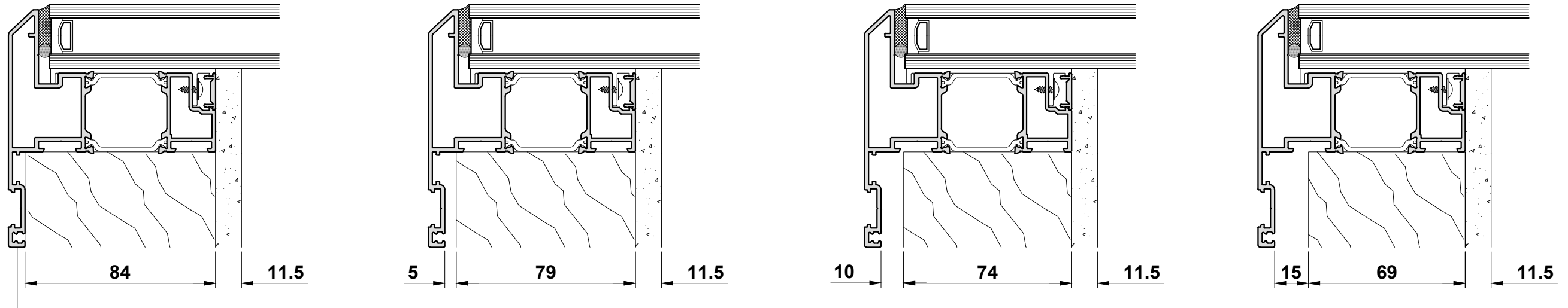
To aid water run off, we recommend all rooflights are fitted at a minimum pitch of 5°.

Inside View

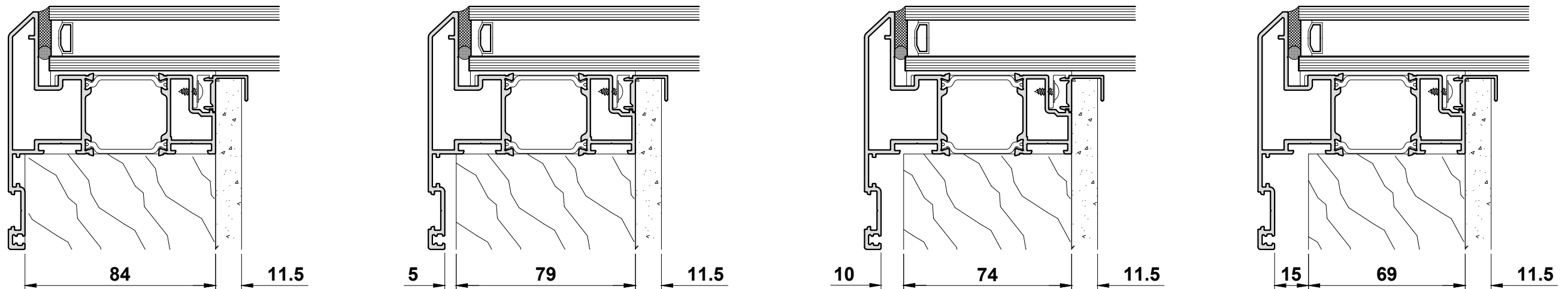


Kerb Sizes

Option A - Plasterboard to glass from internal face of kerb



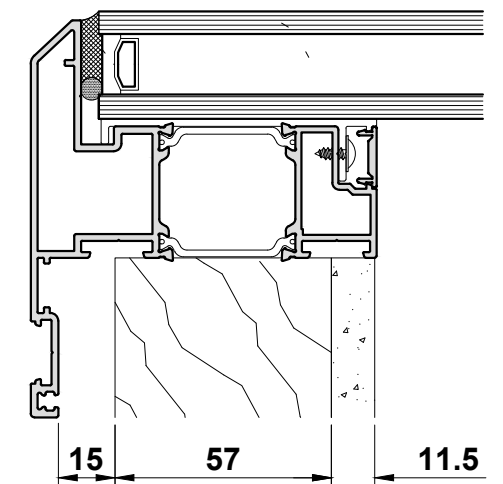
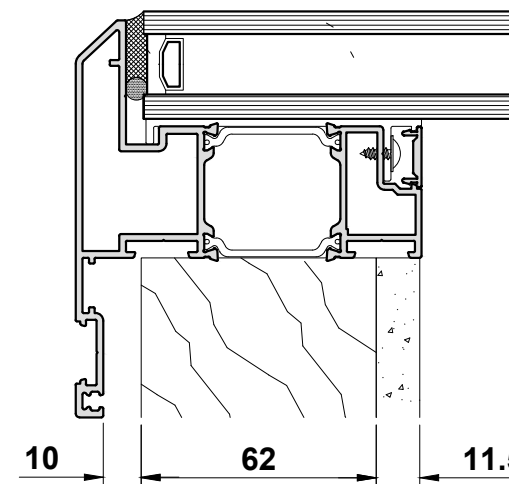
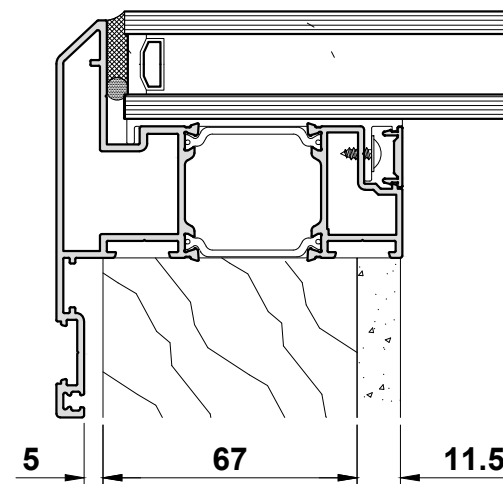
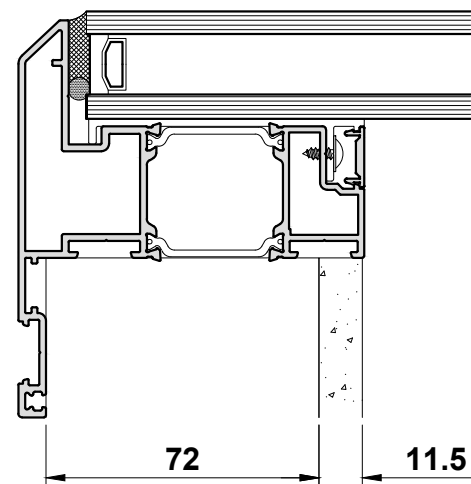
Option B - Plasterboard to EHE252 (plasterboard cap)



Do Not Scale From This Drawing

Kerb Sizes Continued

Option C - Plasterboard flush with inside edge of roof light.



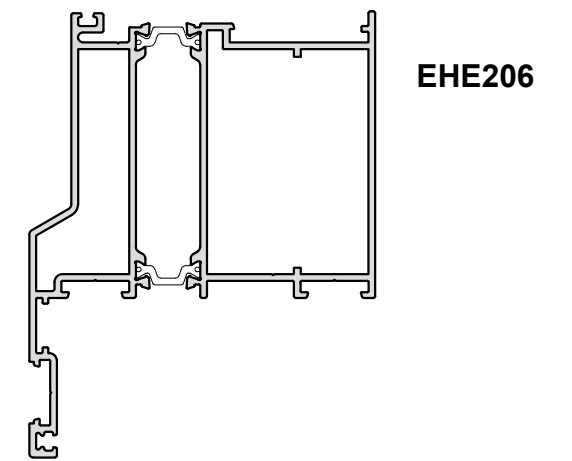
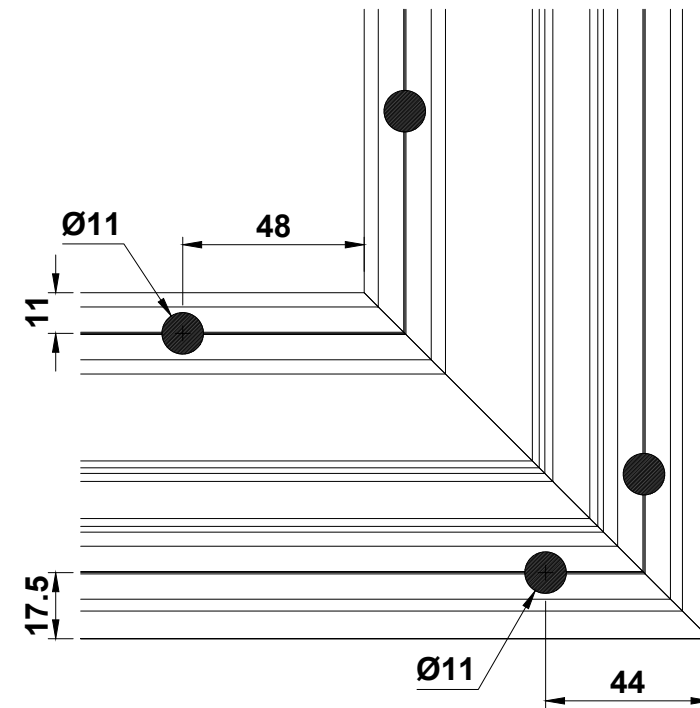
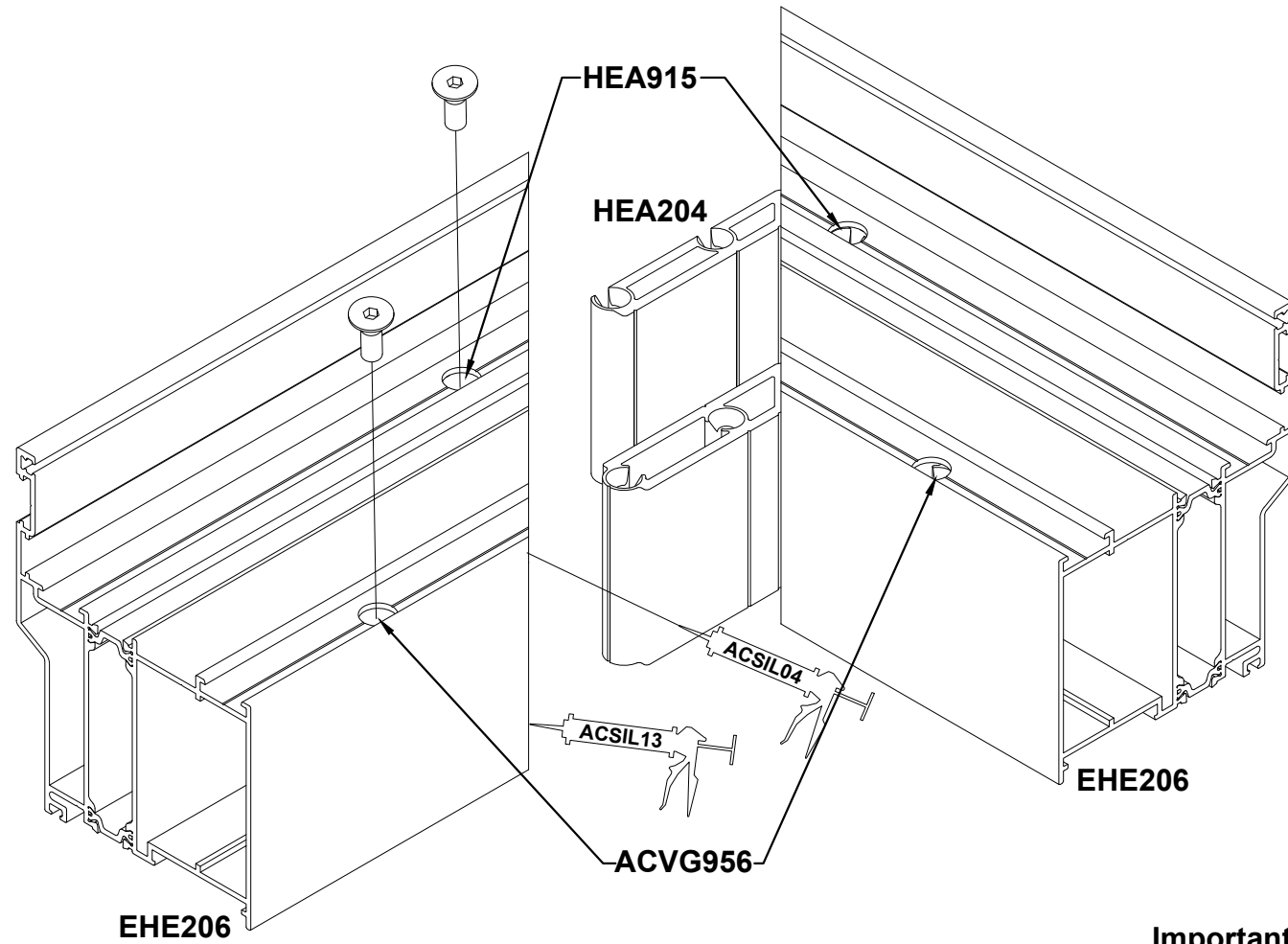
Option A & B will restrict access to the fixing of the PVC.

All drawings show an allowance of 11.5mm for plaster board (9.5mm plasterboard and 2mm plaster) you need to adjust this if using 12.5mm plasterboard.

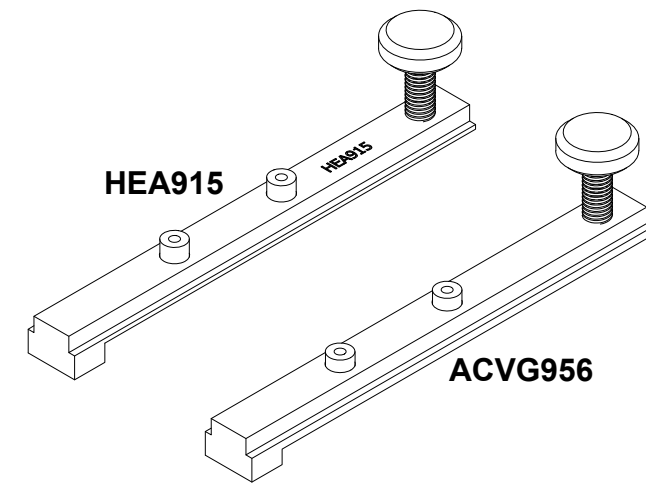
Please note: the sizes that are entered into the fabrication software are the tight external kerb dimensions. An allowance option can then be selected.

Do Not Scale From This Drawing

EHE206 Corner Assembly

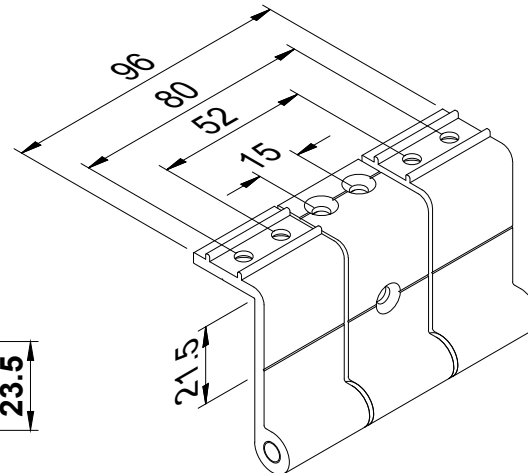
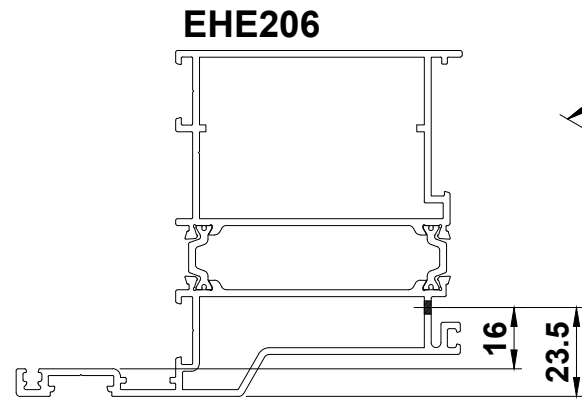
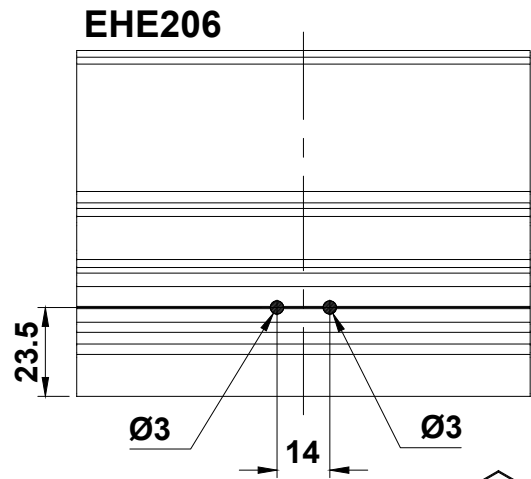


Important Fabrication Note:
HEA204 cleats require 2 screws per cleat. Only drill where shown.

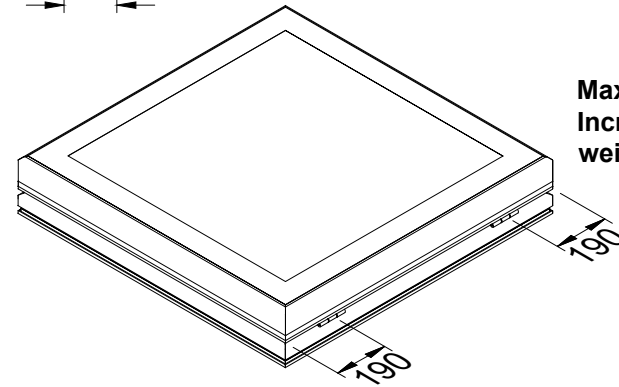
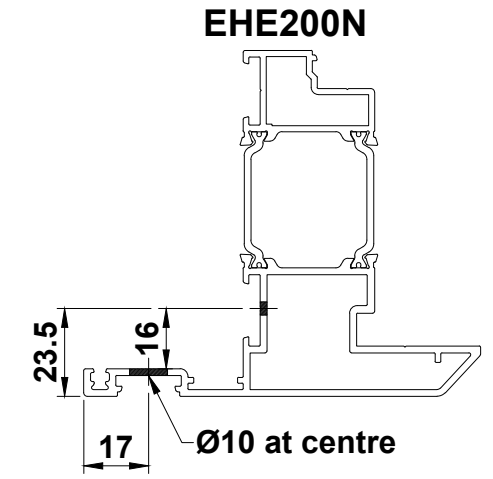
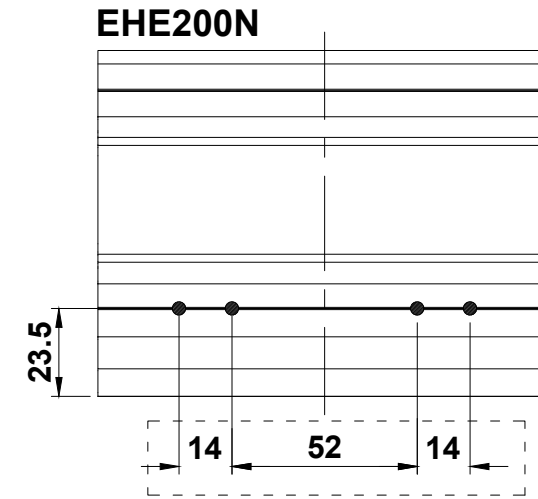


Do Not Scale From This Drawing

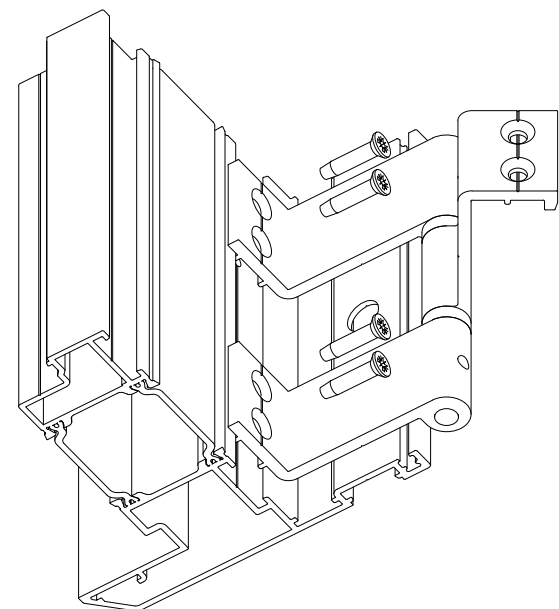
Hinge Details



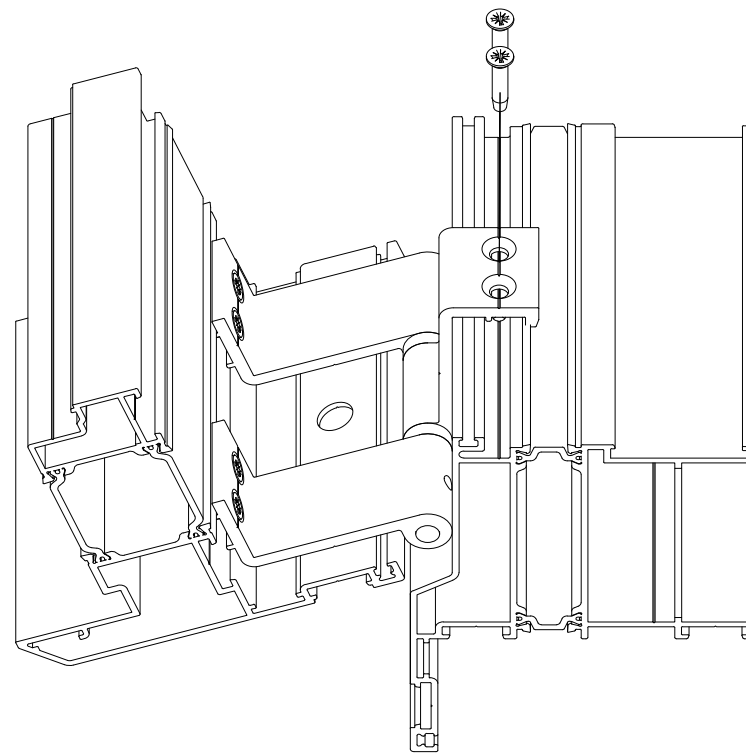
HEA250 Hinge



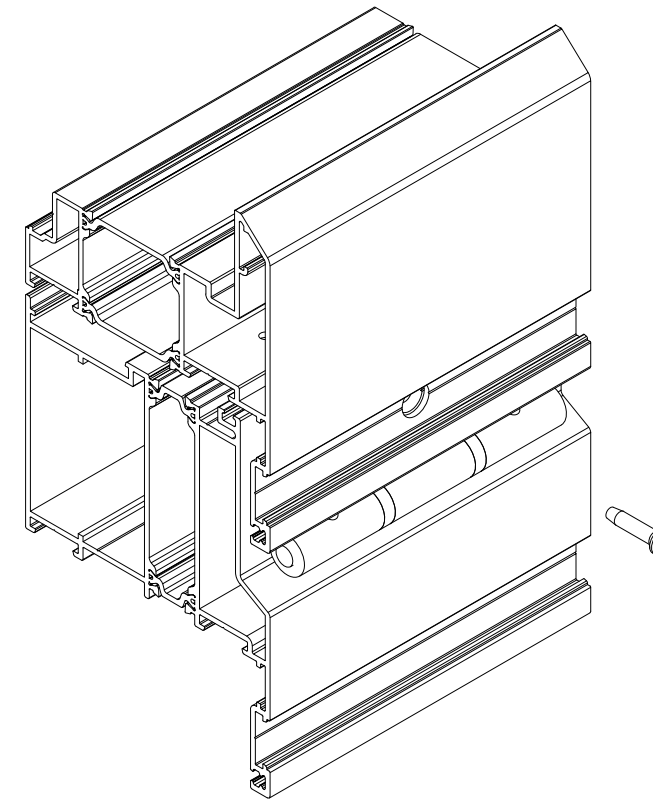
Max weight limit per HEA250 hinge = 25kg.
Increase hinge quantity based on overall weight and space equally.



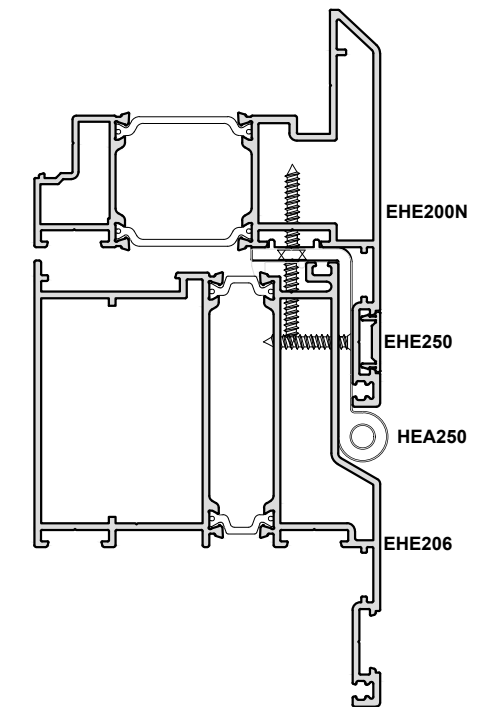
1. Secure hinge to EHE200N using 4 x ACET060:



2. Secure hinge to top of EHE206 using 2 x ACET060 as shown:

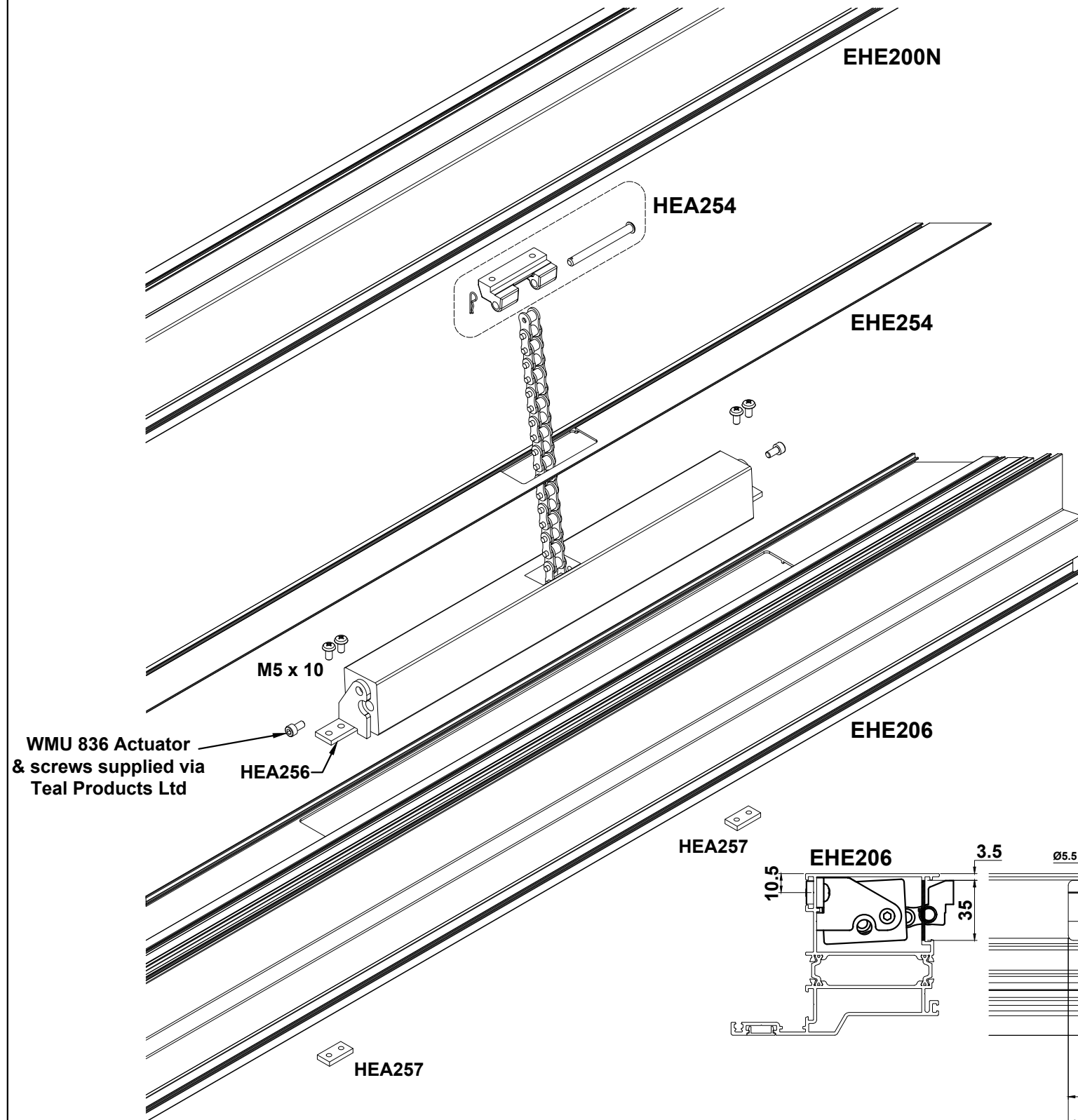


3. Close assembly and secure hinge to side of EHE206 through Ø10mm hole in EHE200N using 1 x ACET060 as shown:



Do Not Scale From This Drawing

Opening Roof Light Actuator Assembly



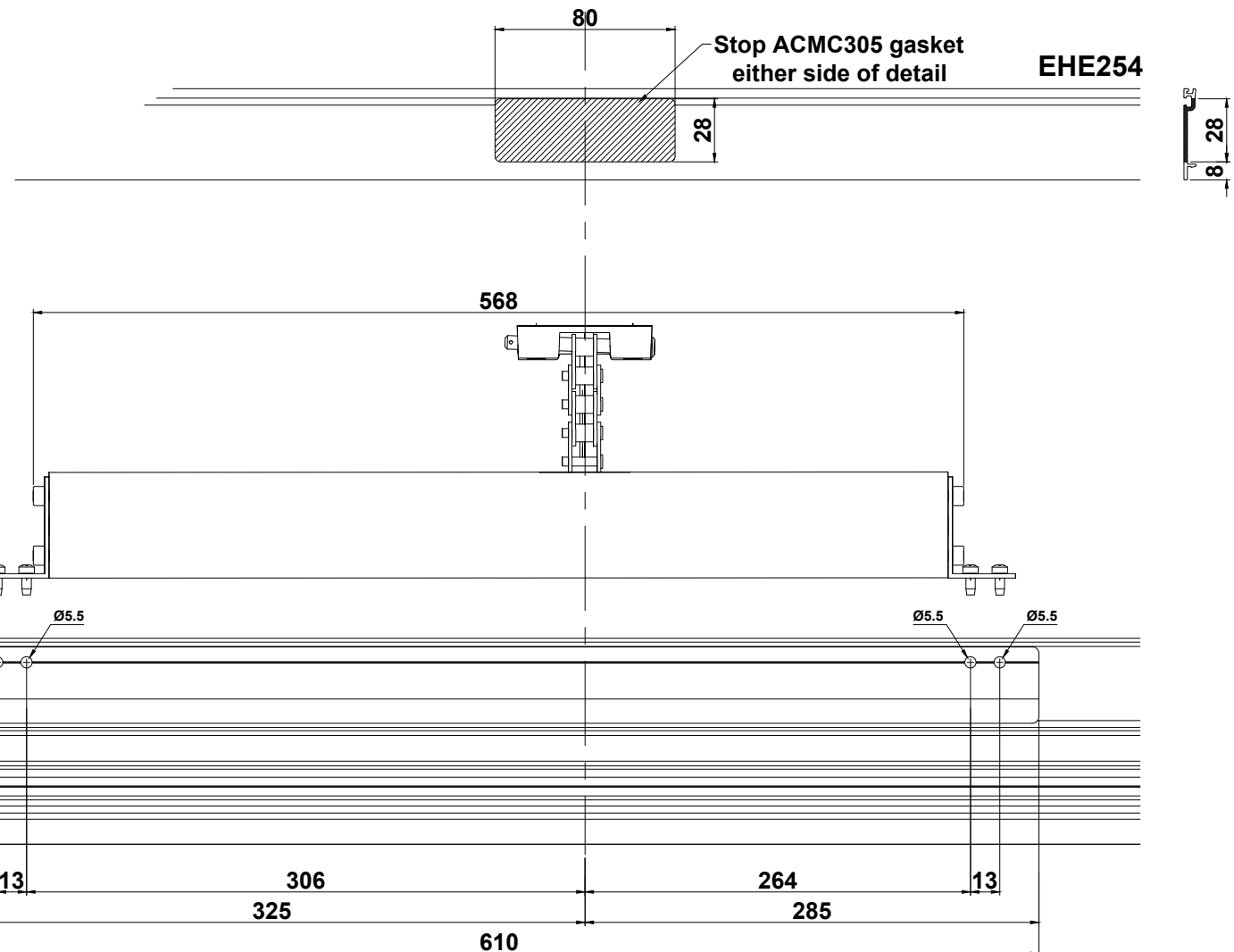
Please contact Teal Products Ltd regarding the installation of WindowMaster's WMU 836 actuator and the available accessory options.

T: 01242 620318

E: sales@tealproducts.co.uk

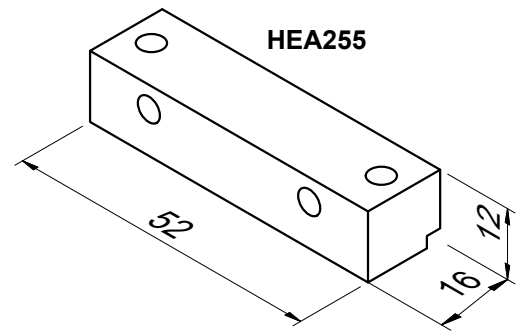
W: www.tealproducts.com/

Teal are a certified partner of WindowMaster.

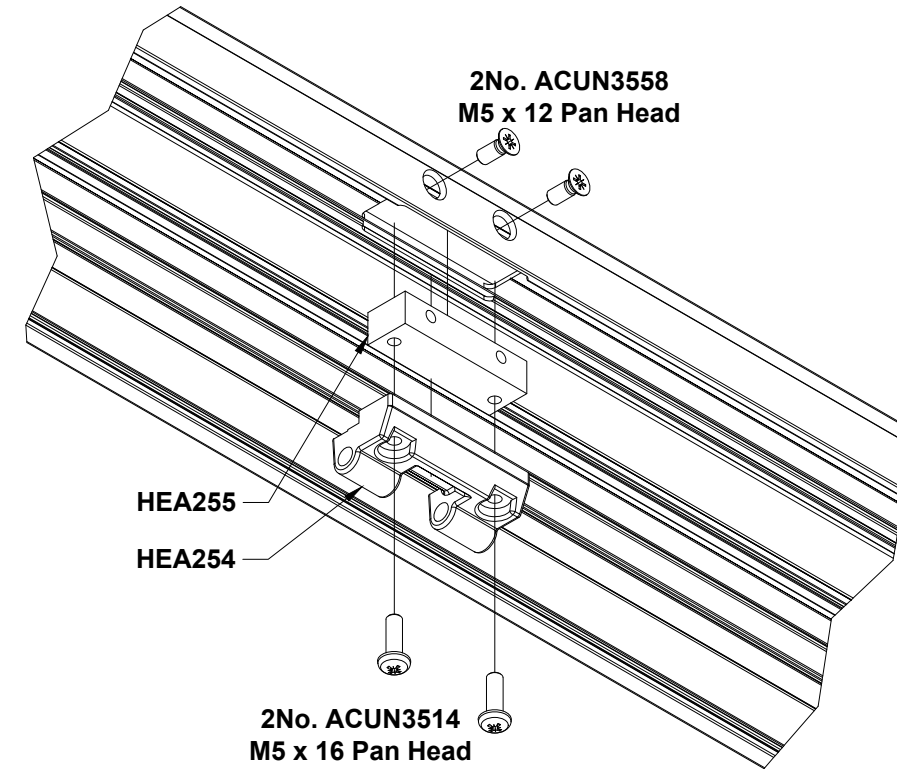
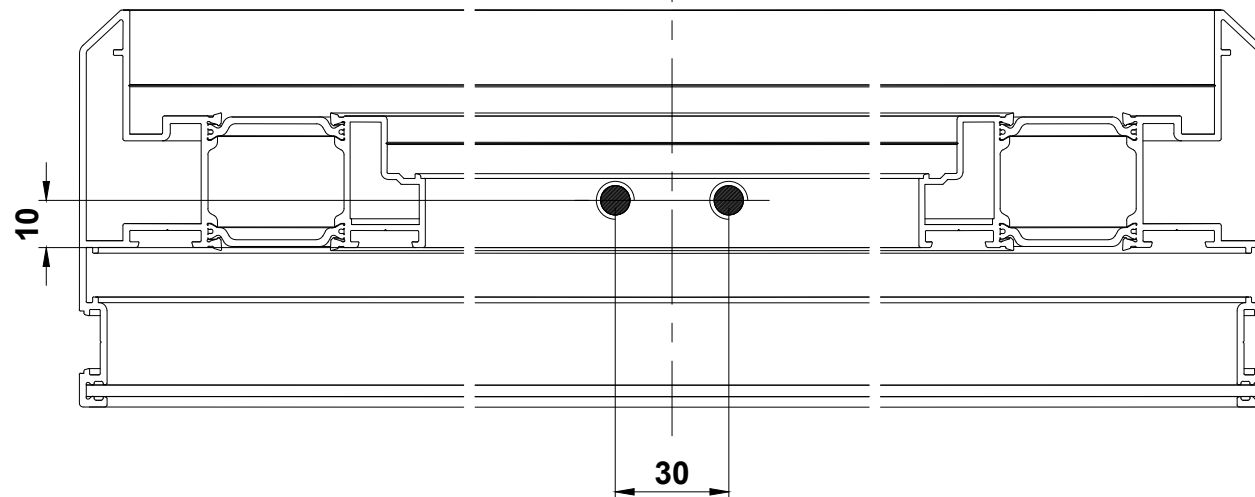
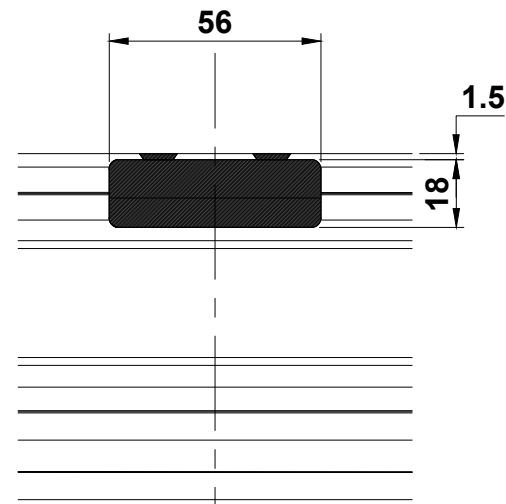


Do Not Scale From This Drawing

EHE255 Detail

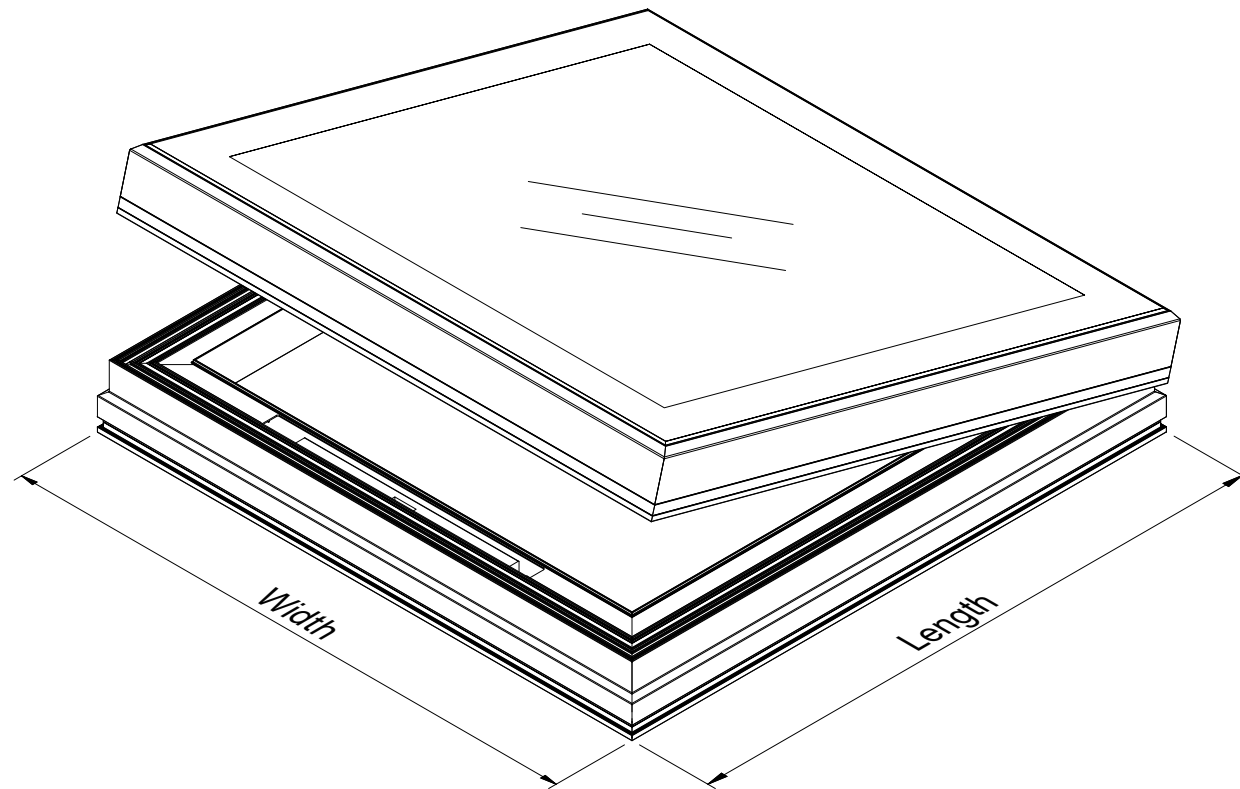


HEA255 allows HEA254 to be fixed through the internal face, which allows access should the actuator fail when closed.

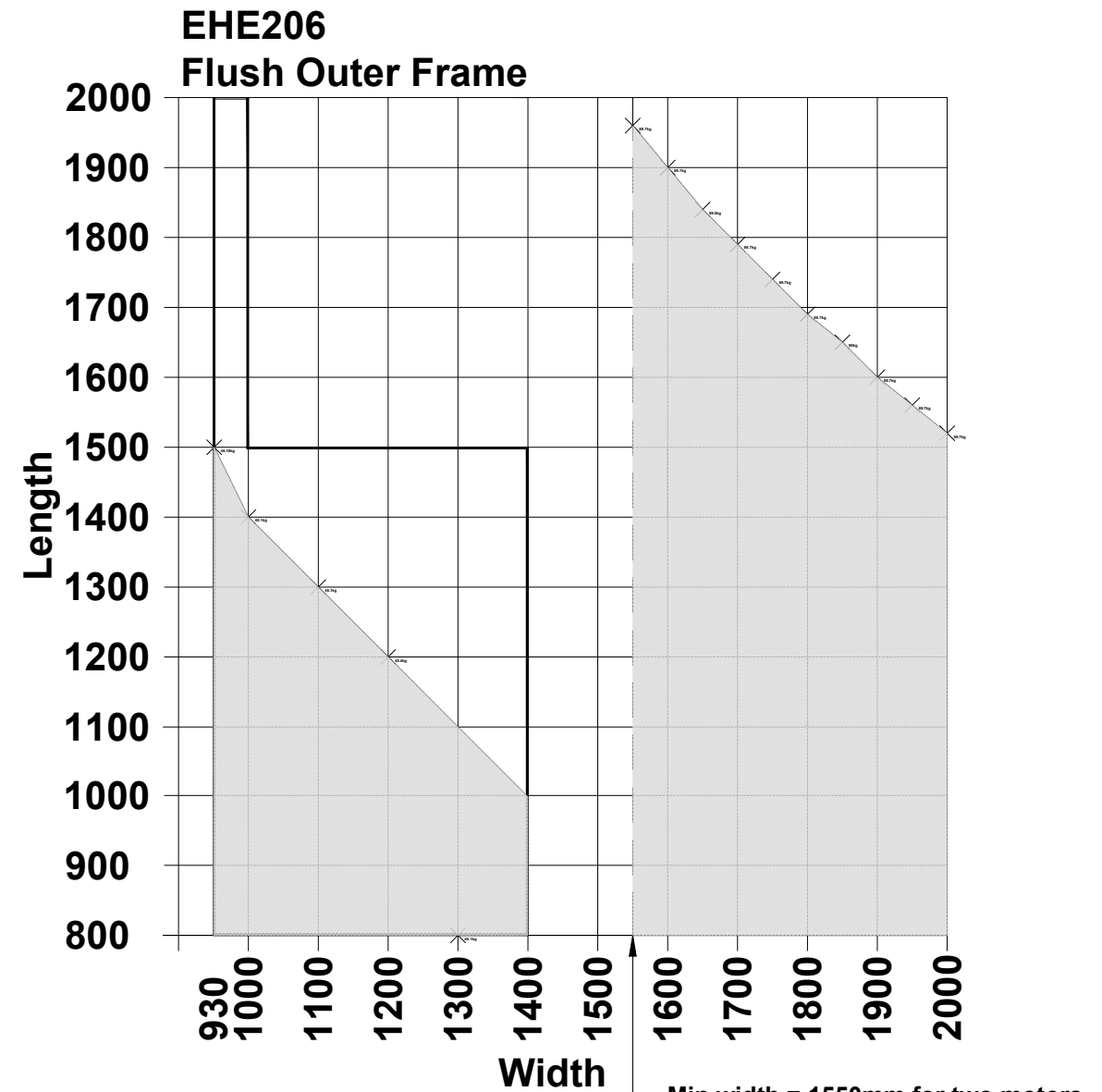


Do Not Scale From This Drawing

Opening Rooflight Size Guidance



Chain Stroke = 400mm



Max casement weight = 45kg*
(using 2 x HEA250 hinges)

Min width = 1550mm for two motors
Max weight with two motors = 90kg
(using 4 x HEA250 hinges)

▨ Hatched area shows sizes achievable based on casement weight when using 6.8mm/4mm units

— Sizes within line are achievable where weight permits

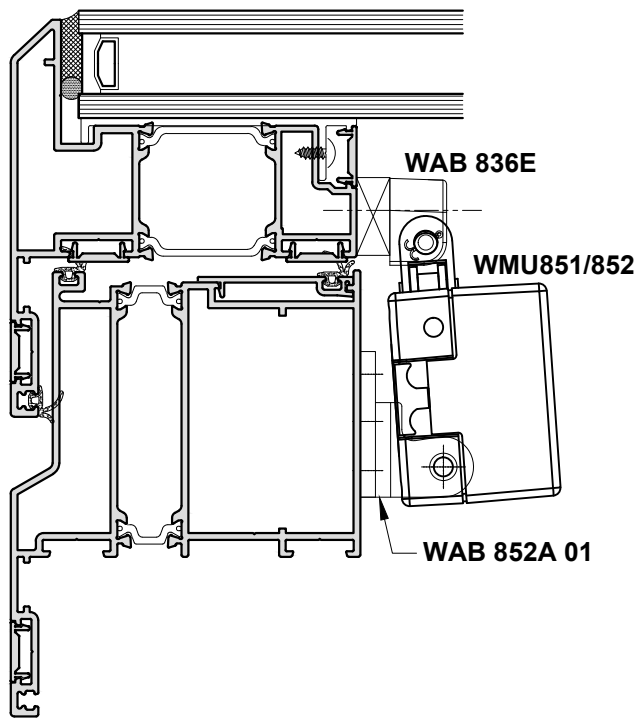
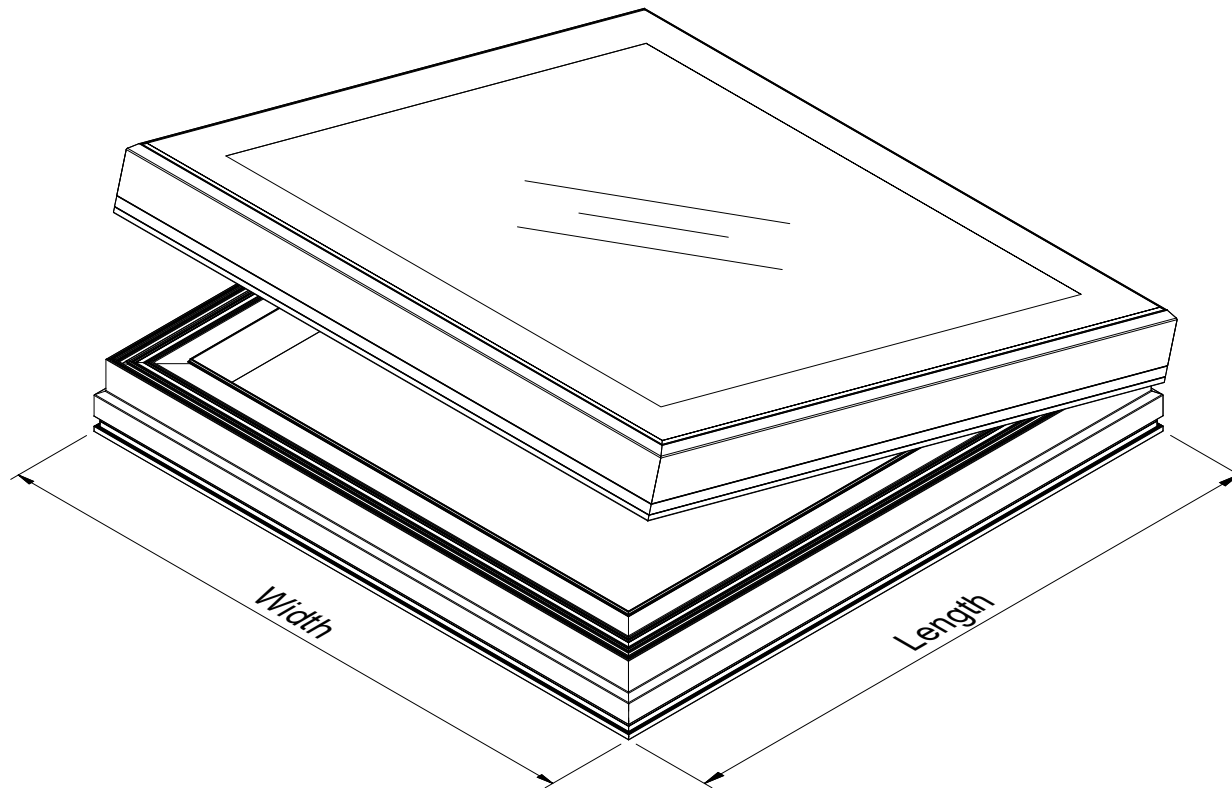
* Increase hinge quantity based on overall weight. Each HEA250 hinge = 25kg limit.

Opening Rooflight Details:

- Sizes shown are based on WindowMaster WMU 836 supplied by Teal Products Ltd
- 1400mm is the maximum width using a single motor
- 1550mm is the minimum width for two motors
- The cable for the WMU 836 actuator needs to be run through the frame.
- Please contact Teal Products Ltd regarding the supply and installation of the actuators.

Do Not Scale From This Drawing

Opening Rooflight Size Guidance

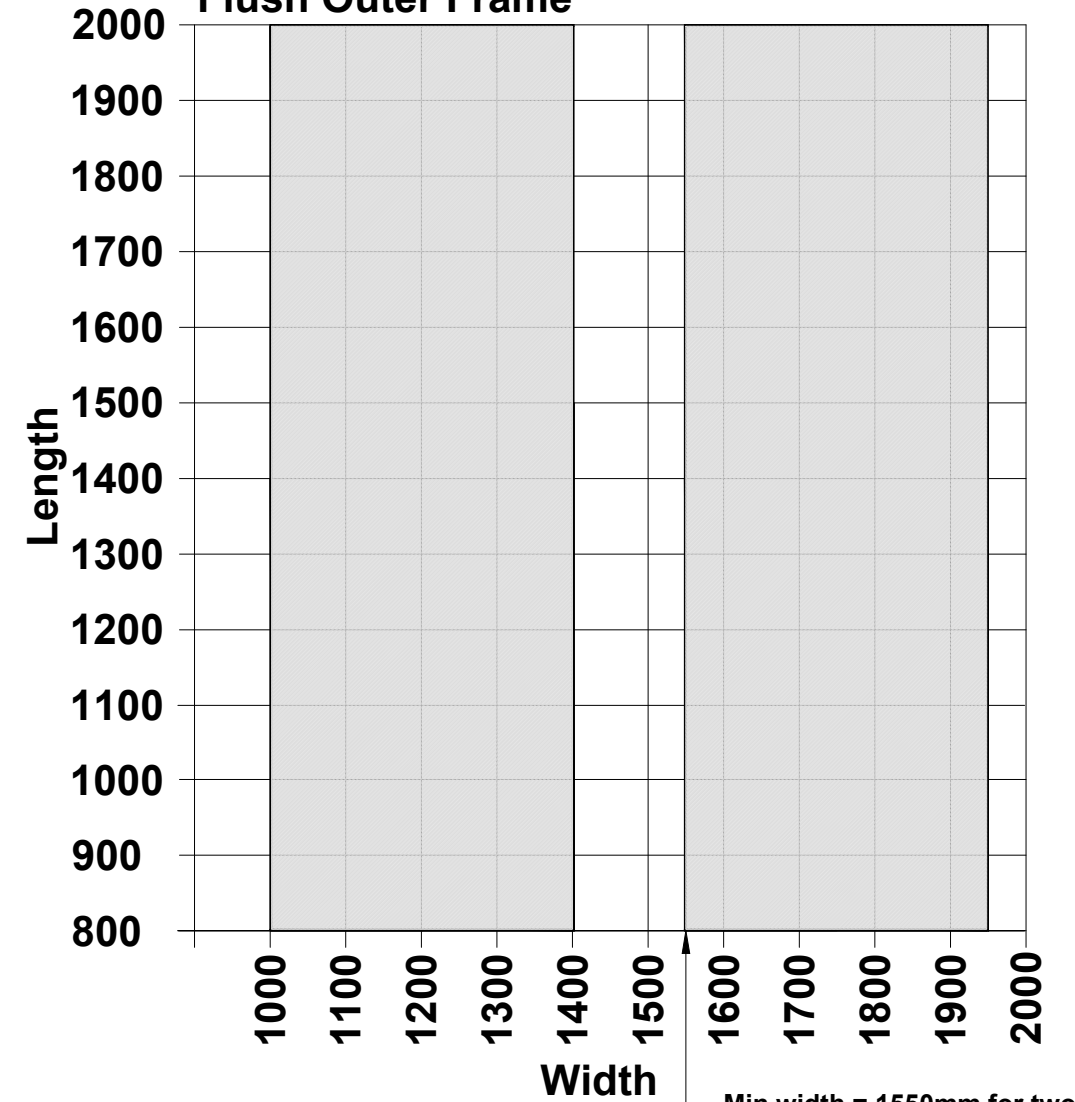


Opening Rooflight Details:

- Sizes shown are based on WindowMaster
- WMU 851 / 852 supplied by Teal Products Ltd
- 1400mm is the maximum width using a single motor
- 1550mm is the minimum width for two motors
- Please contact Teal Products Ltd regarding the supply and installation of the actuators.

Chain Stroke = 400mm

**EHE206
Flush Outer Frame**



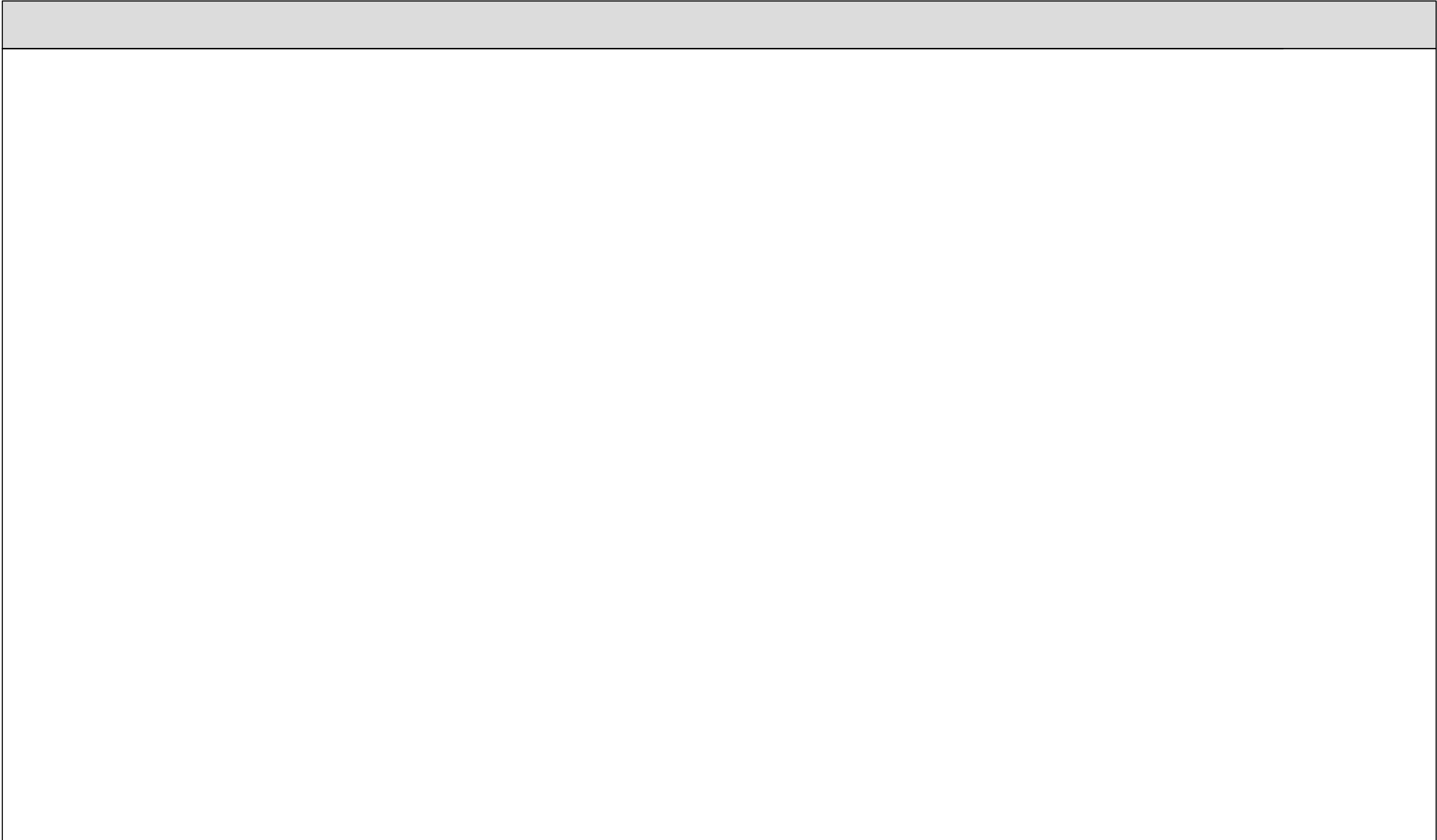
Max casement weight = 80kg*
(using 4 x HEA250 hinges)

Min width = 1550mm for two motors
Max weight with two motors = 160kg
(using 7 x HEA250 hinges)

■ Hatched area shows sizes achievable based on casement weight when using 6.8mm/4mm units
— Sizes within line are achievable where weight permits

* Increase hinge quantity based on overall weight. Each HEA250 hinge = 25kg limit.

Do Not Scale From This Drawing



Do Not Scale From This Drawing

Section F



Sawing Tables

Fixed Rooflight.....	F03 - F05
Walk On Rooflight.....	F06
Opening Vent Rooflight.....	F07

Section F

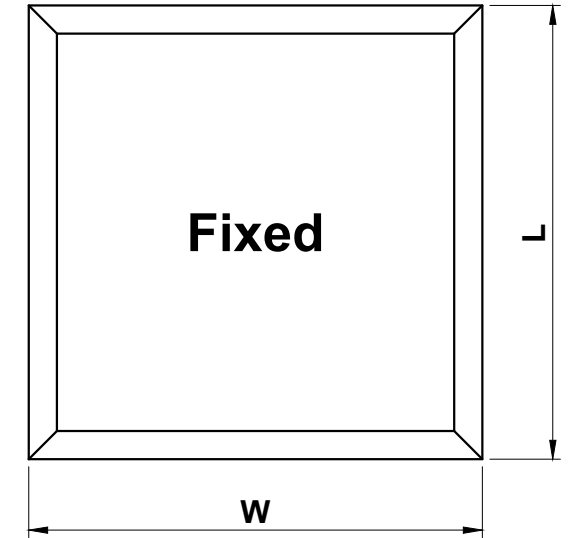
Fixed Rooflight

Profiles

EHE200N		2		W
EHE200N		2		L
EHE250		2		W
EHE250		2		W - 183
EHE250		2		L
EHE250		2		L - 183
EHE255		2		W - 37
EHE255		2		L - 37

Accessories

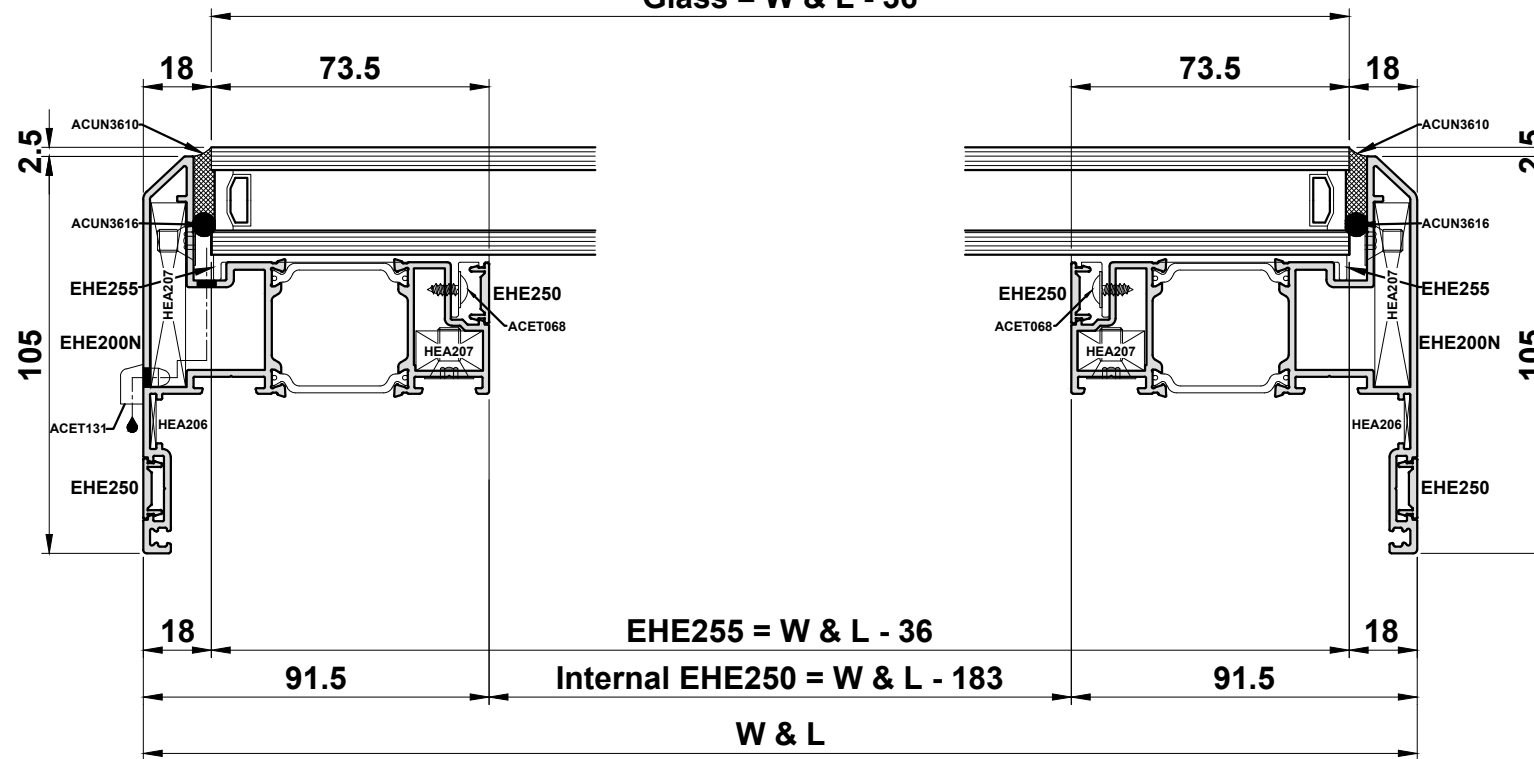
HEA206		4	EHE200N Chevron
HEA207		4	EHE200N Cleat Pack
ACET068		300mm Centres	No.8 x 3/8 SS Flange Screw
ACET131		2	Drainage Cap
ACUN3616		2xW-36 & 2xL-36	ACUN3610 Backing Rod



Glass Sizes

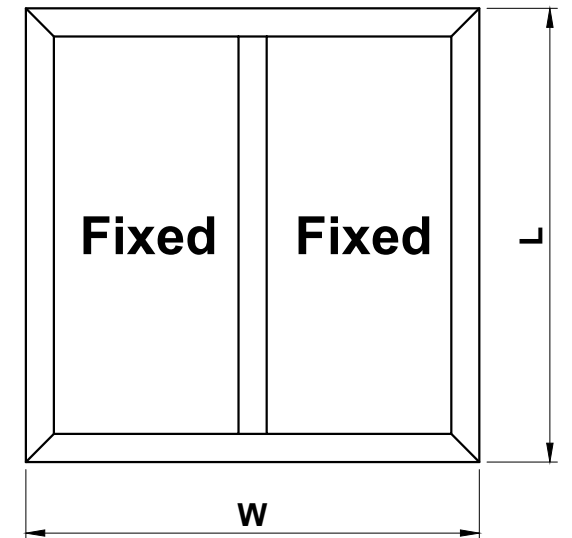
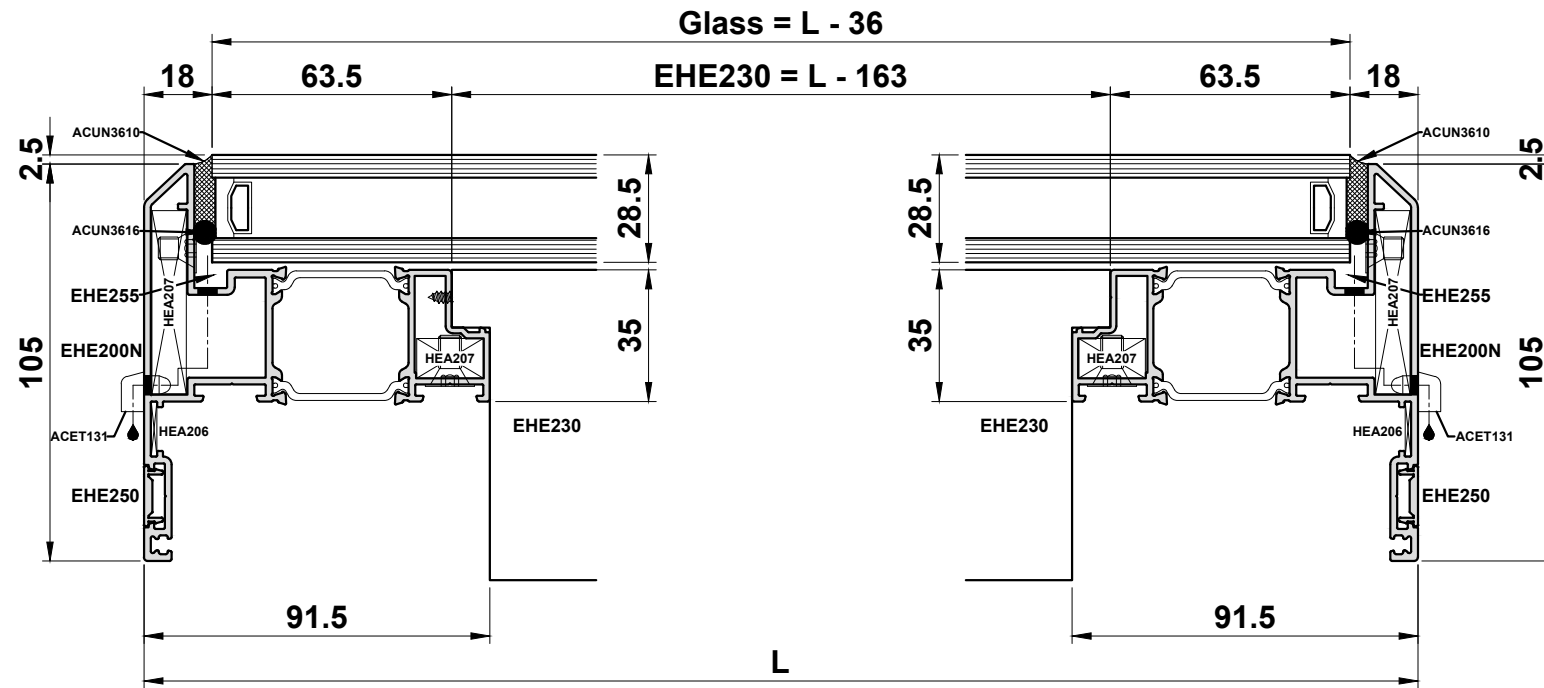
1x	W - 36
	L - 36

Glass = W & L - 36



Do Not Scale From This Drawing

Fixed Rooflight with Mullion



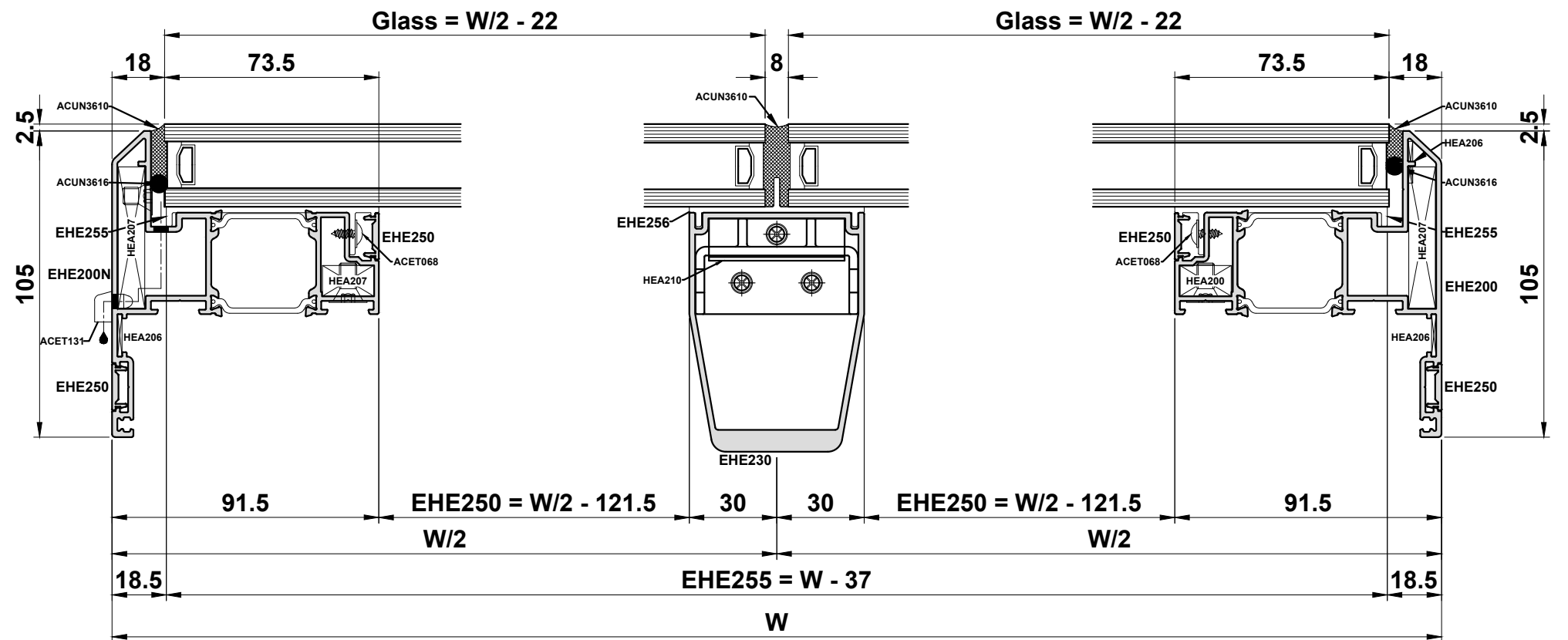
Accessories

HEA206		4	EHE200N Chevron
HEA207		1	EHE200N Cleat Pack
HEA210		2	EHE230 Bracket
HEA211		2	EHE230 Fixing Bracket
ACET068		300mm Centres	No.8 x 3/8 SS Flange Screw
ACET131		4	Drainage Cap
ACUN3616		2xW-36 & 2xL-36	ACUN3610 Backing Rod

Profiles

EHE200N		2	W
EHE200N		2	L
EHE230		1	L - 163
EHE250		4	W/2 - 121.5
EHE250		2	W
EHE250		4	L - 183
EHE250		2	L
EHE255		2	W - 37
EHE255		2	L - 37
EHE256		1	L - 163

Glass Sizes	
2x	W/2 - 22
	L - 36

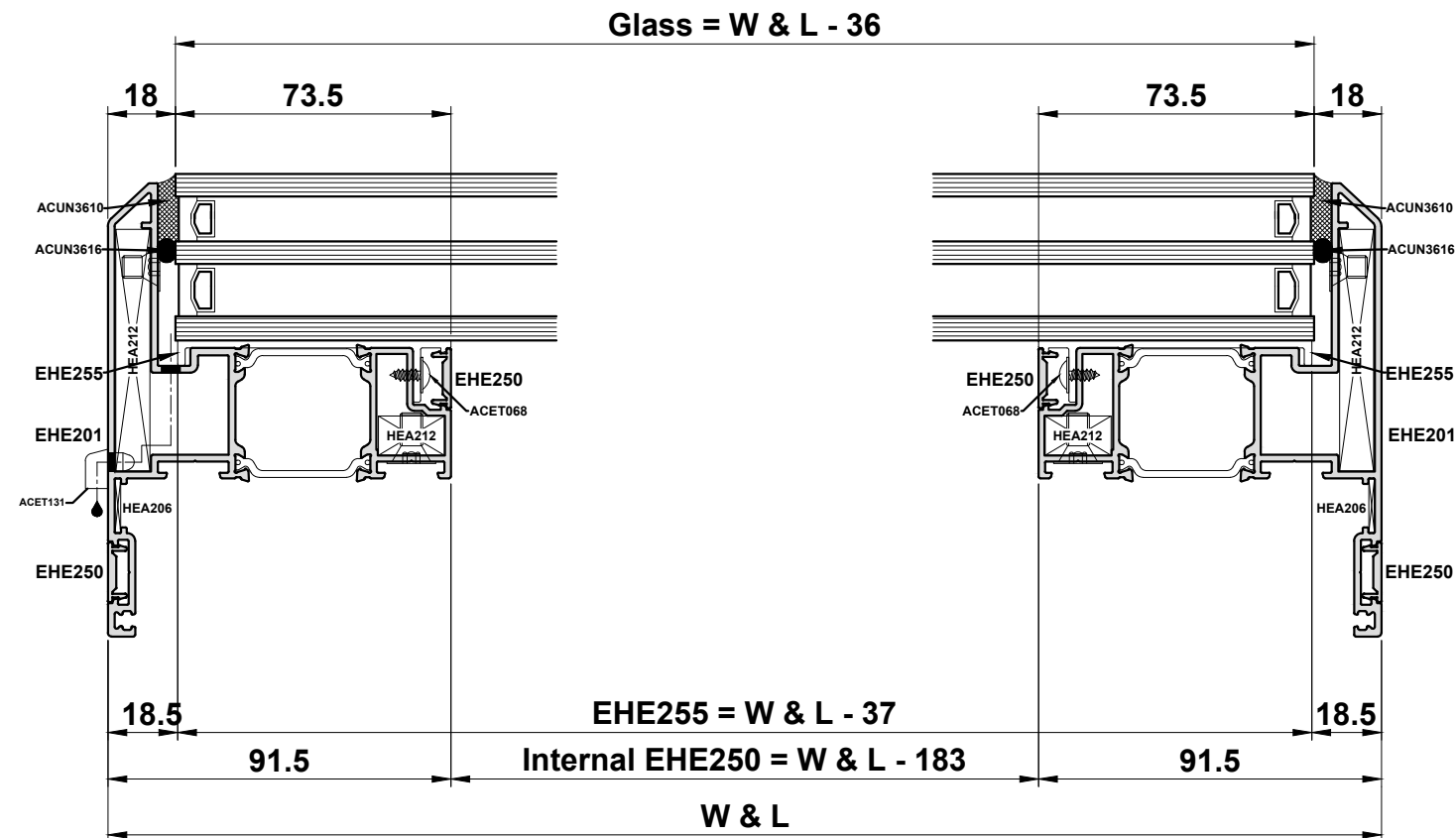
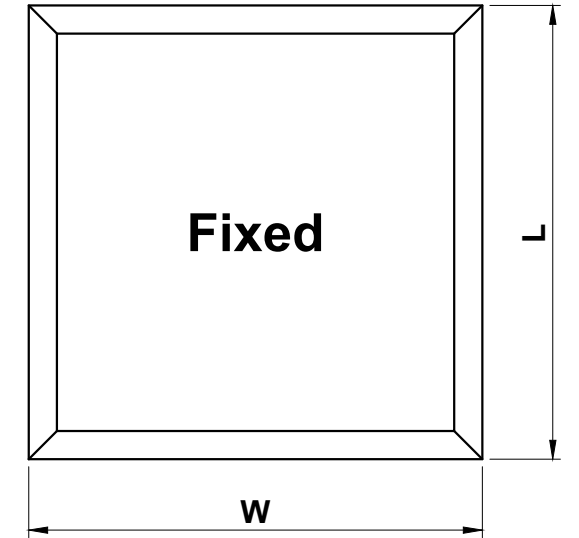


Do Not Scale From This Drawing

Fixed Rooflight

Profiles				
EHE201		2		W
EHE201		2		L
EHE250		2		W
EHE250		2		W - 183
EHE250		2		L
EHE250		2		L - 183
EHE255		2		W - 37
EHE255		2		L - 37

Accessories		
HEA206		4 EHE200N Chevron
HEA212		4 EHE201 Cleat Pack
ACET068		300mm Centres No.8 x 3/8 SS Flange Screw
ACET131		2 Drainage Cap
ACUN3616		2xW-36 & 2xL-36 ACUN3610 Backing Rod



Do Not Scale From This Drawing

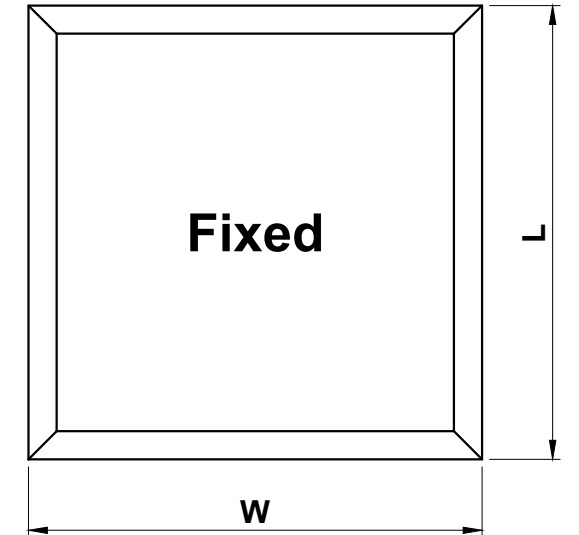
Walk On Rooflight

Profiles

EHE202N		2		W
EHE202N		2		L
EHE250		2		W
EHE250		2		W - 183
EHE250		2		L
EHE250		2		L - 183
EHE255		2		W - 37
EHE255		2		L - 37
UTL049		2		W - 42
UTL049		2		L - 42

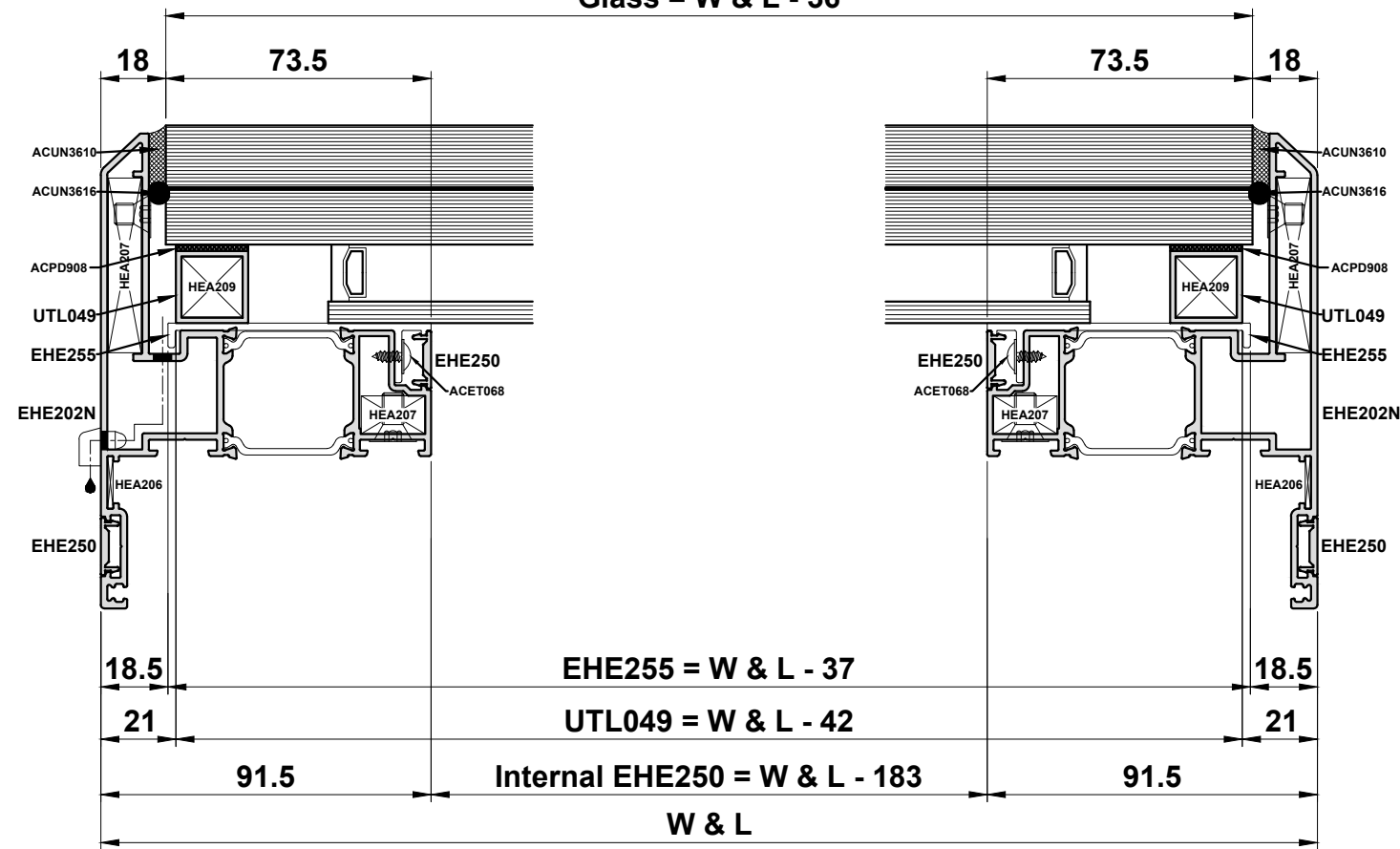
Accessories

HEA206		4	EHE202N Chevron
HEA207		1	EHE202N Cleat Pack
HEA209		4	UTL049 Cleat
ACET068		300mm Centres	No.8 x 3/8 SS Flange Screw
ACET131		2	Drainage Cap
ACUN3616		2xW-36 & 2xL-36	ACUN3610 Backing Rod



Glass Sizes	
1x	W - 36
	L - 36

Glass = W & L - 36



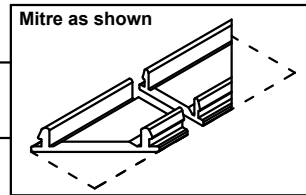
Do Not Scale From This Drawing

Opening Rooflight

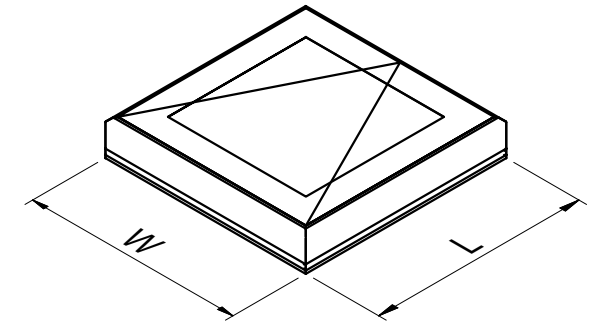
Profiles

EHE200N		2		W
EHE200N		2		L
EHE206		2		W
EHE206		2		L
EHE250		4		W
EHE250		4		L
EHE250		4		W - 183
EHE250		4		L - 183
EHE250		2		W - 146
EHE250		2		L - 146
EHE250		2		W - 30
EHE250		2		L - 30
EHE254		2		W - 97
EHE254		2		L - 97
EHE255		2		W - 37
EHE255		2		L - 37

Glass Sizes	
1x	W - 36
	L - 36



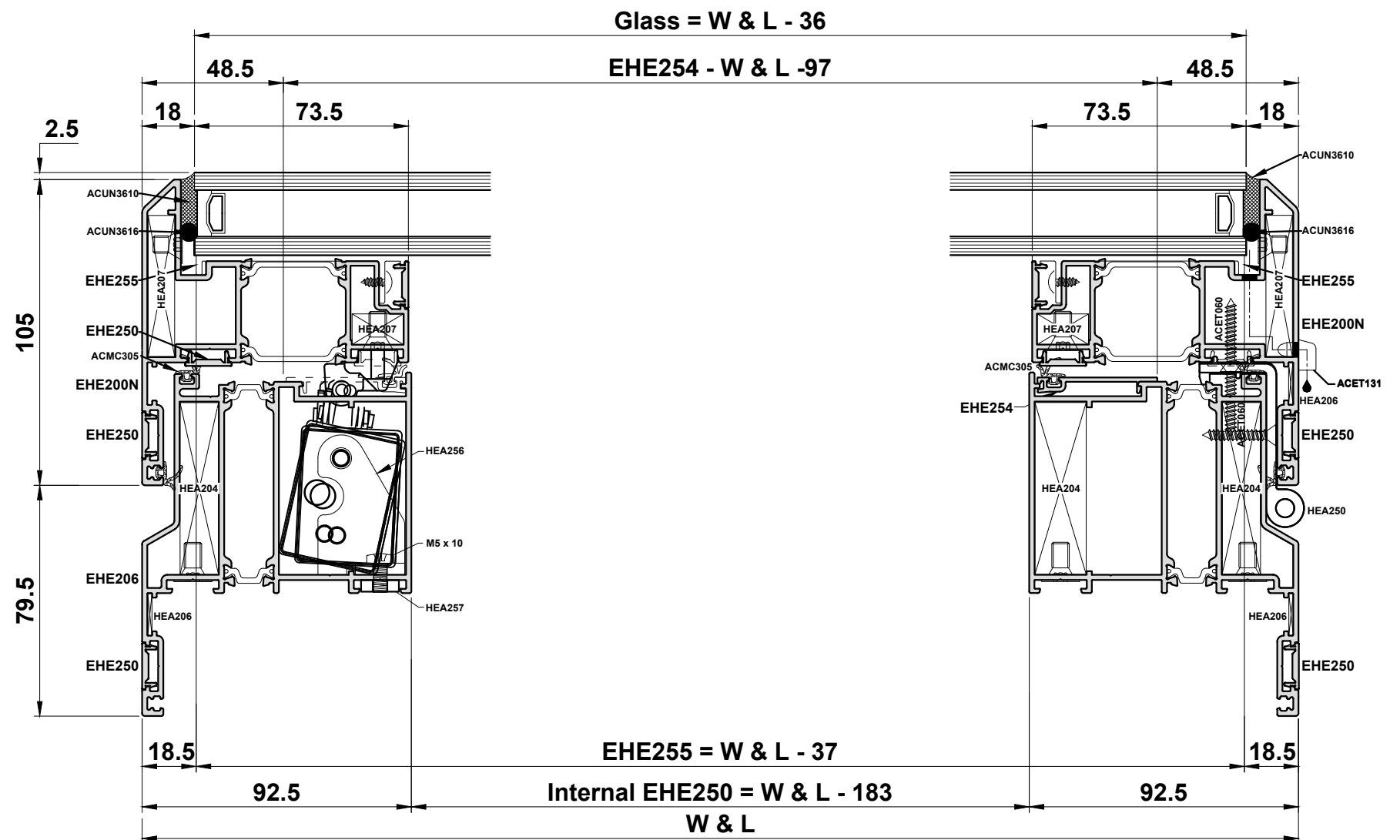
Please contact:
Window Master Control Systems Ltd
T. 01536 614070 / Windowmaster.com
for opening actuator ordering details.



Accessories

HEA204		1	EHE206 Cleat Pack
HEA206		4	Chevron
HEA207		1	EHE200N Cleat Pack
HEA250		2*	Hinge
HEA254		1	Actuator Chain Bracket
HEA255		1	HEA254 Fixing Bracket
HEA256		1 Pair	Actuator Motor Brackets
HEA257		2	Actuator Bracket Fixing Plate
ACET060		14	No.7 x 1 Hinge Screws (7 per hinge)
ACET068		300mm Centres	No.8 x 3/8 SS Flange Screw
ACET131		2	Drainage Cover Cap
ACMC305		4	W & L - 22
ACMC305		4	W & L - 160
ACUN3514		2	M5 x 25 Pan Head for HEA254
ACUN3558		2	M5 x 10 Pan Head for HEA255
ACUN3616		2xW-36 & 2xL-36	ACUN3610 Backing Rod

*Additional hinges required depending on sash width and weight.
See pages E16 & E17 for further details.



Do Not Scale From This Drawing