Interlock™

Design Guide: Wall Cladding

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Form And Function

Stratco Interlock is a modern architectural wall cladding system ideal for domestic and commercial applications. Interlock cladding can be fixed either by conventional screw-fix techniques through the overlap along the recessed joint of the adjoining panels, or by using the innovative Interlock Bracket that conceals all fasteners and achieves a superior architectural finish, enhanced corrosion performance, and a stronger, more reliable connection.

Stratco Interlock cladding can be installed either vertically or horizontally to achieve the perfect look for any project.

Available in a full range of roofing colours including matt and metallic options and a variety of specialty architectural finishes including copper, Corten and stainless steel, there is a finish that will compliment your building and it's surrounds.

Interlock cladding is available in three standard pan widths and three shadow line options. These can be mixed and matched on a project to achieve a truly unique aesthetic with maximum visual impact.

Design Considerations

Interlock sheeting shall be installed continuous over two spans minimum and restrained to timber supports or metal studs or battens with a minimum base metal thickness (BMT) of 0.55mm. The Quick Selection Guide has been prepared based on loading imposed from wind classification up to and including non-cyclonic domestic classification N5. Stratco does not accept liability for any loss or damage suffered as a result of any errors in the interpretation of these span tables.

Light gauge steel cladding with wide pans may exhibit oil canning which can affect the aesthetics of the building design. Oil canning will vary depending on the time of day and angle of viewing and will likely be more noticeable in darker colours. Oil canning will also be more prevalent in wider pans and longer sheet runs. Building designers and homeowners should be aware of this and take it into consideration.

Please take note of the installation recommendations for horizontal cladding to minimise the risk of moisture ingress.

Compliance

Testing has been performed in accordance with AS1562.1-2018 and AS4040.0, 1 & 2-1992. Walling allowable spans and fastener allocation have been determined based on relevant pressures determined in accordance with AS4055, Wind Loads for Housing, for domestic applications and AS/NZS1170.2-2016 for industrial/ commercial applications. Interlock wall sheeting is classified as a 'non-combustible' material in accordance with NCC 2019, Building Code of Australia.

Quick Selection Guide

The wind classifications are based on a building eaves height not exceeding 6.0m and a building aspect ratio not exceeding 1. The building aspect ratio is defined as the average roof height divided by the smaller of the building's width or length. Walling calculations are based on Cpe=-0.65 and Cpi=0.2. A local pressure factor, Kl=1.5 has been used for all spans for both strength and serviceability limit states.

Stratco can provide additional engineering advice if any design parameters vary from those above.

Profile

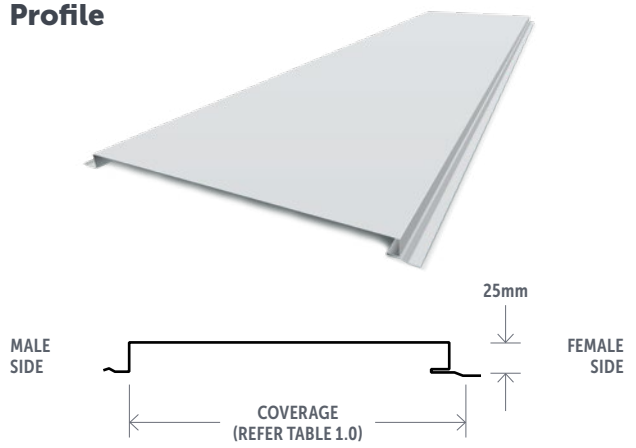


Figure 1.0: Exposed Fixing Detail

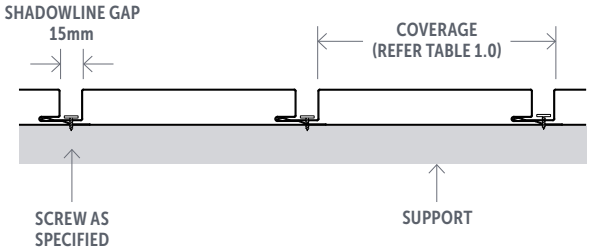
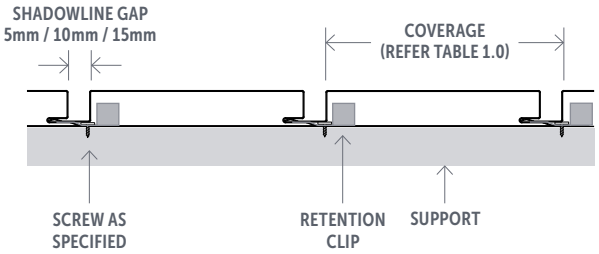


Figure 2.0: Concealed Fixing Detail



Wind Load Conversion

For domestic applications use the appropriate wind classification for the area. To read span tables for commercial and industrial applications, select the region, terrain category and shielding for the area, then convert it to a wind classification using table 5.0.

Maintenance Requirements

The performance of Interlock cladding over time depends on its correct application and maintenance. Maintenance should be performed as often as is required to remove any dirt, salt and pollutants.

Where Interlock cladding is used in severly corrosive environments, cleaning should be performed more often. It is important that screws have the same life expectancy as the Interlock cladding. Packs of Interlock sheeting should always be kept dry and stored above ground level on site. If the sheets have become wet, they should be separated, wiped and placed in the open to dry.

Refer to the Stratco 'Selection, Use and Maintenance' brochure for more detailed information about the correct use and maintenance of this product.

Material Specifications

Table 1.0

				Cover							
				200		250		300		500	
Material	Gauge (mm)	Tensile Strength	Metallic Coating	kg/lm	kg/m²	kg/lm	kg/m²	kg/lm	kg/m²	kg/lm	kg/m²
Colorbond®	0.55 BMT	G300	AM100	1.34	6.69	1.56	6.25	1.79	5.96	–	–
Colorbond®	0.7 BMT	G300	AM100	1.70	8.48	1.98	7.92	2.27	7.55	3.41	6.82
ULTRA	0.55 BMT	G300	AM150	1.35	6.76	1.58	6.32	1.81	6.03	–	–
Zincalume®	0.55 BMT	G300	AM125	1.32	6.62	1.55	6.19	1.77	5.90	–	–
Traditional Galvanised	0.55 BMT	G300	Z600	1.48	7.41	1.73	6.93	1.98	6.60	–	–
Woodgrain	0.55 BMT	G300	AM150	1.42	7.09	1.66	6.62	1.89	6.32	–	–
Weathering Steel	0.7 BMT	–	Mill Finish	1.66	8.31	1.94	7.76	2.22	7.40	–	–
Aluminium	0.8 BMT	–	5005	0.65	3.25	0.76	3.04	0.87	2.89	–	–
Copper	0.7 BMT	–	Mill Finish	1.86	9.30	2.17	8.70	2.49	8.29	–	–

Note: 0.7 BMT colour availability by enquiry.

Quick Selection Guide

Table 2.0 - Maximum Wind Classification

Fixing Type	Coverage (mm)	Gauge	Span (mm) 450	600	900
Exposed Fix	200	0.55 / 0.7	N5	N4	N1
	250	0.55 / 0.7			
	300	0.55 / 0.7			
	500	0.7			
Concealed Fix	200	0.55 / 0.7	N5	N3	N2
	250	0.55 / 0.7			
	300	0.55 / 0.7			
	500	0.7			

Note: Interlock wall sheeting shall be installed continuous over two spans minimum.

Table 3.0 - Maximum Recommended Spans (mm)

Wind Category	Fixing Method	Internal	End
N1	Exposed	900	900
	Concealed	900	900
N2	Exposed	600	600
	Concealed	900	900
N3	Exposed	600	600
	Concealed	600	600
N4	Exposed	600	600
	Concealed	450	450
N5	Exposed	450	450
	Concealed	450	450

Substrate: Minimum 0.55 BMT G300 or 15mm structural plywood.

Table 4.0 - Wind Capacities (kPa)

Cover	BMT (mm)	Fixing Type	Limit State	Span (mm) 450	600	900
200 250 300	0.55 / 0.7	Exposed	Serviceability	2.50	2.83	0.63
			Strength	4.78	3.20	0.86
		Concealed	Serviceability	2.50	1.98	0.63
			Strength	4.74	2.68	1.91
500	0.7	Exposed	Serviceability	3.70	2.93	0.80
			Strength	6.95	3.54	0.99
		Concealed	Serviceability	2.57	1.88	0.92
			Strength	6.02	2.67	1.61

Note: Interlock wall sheeting shall be installed continuous over two spans minimum.

Table 5.0 - Approximate Wind Load Conversion

Region	Terrain Cat.	Ms (Shielding)	Wind Classification
A	3	0.9	N1
		1	N2
	2.5	0.9	N2
		1	N2
	2	0.9	N2
		1	N3
B	3	0.9	N3
		1	N3
	2.5	0.9	N3
		1	N4
	2	0.9	N3
		1	N4

For Commercial and industrial applications. Structure Importance level = 2.0. 500 year design return period. Mt (topographic) and Md (directional) multipliers = 1.0. Maximum overall building height = 10m.

Fastener Selection

Table 6.0

Fixing Type	Support	Coverage	Retention Clip	Fastener	
Exposed	Steel Batten, Minimum 0.55mm BMT G550	200, 300, 500	NA	10g-16x16mm hex head self-drilling screw with neoprene washer	Class 4 corrosion protection
	Timber#	200, 300	NA	10g-12x25mm Type 17 hex head screw with neoprene washer	Class 4 corrosion protection
		500		10g-12x35mm Type 17 hex head screw with neoprene washer	
Concealed	Steel Batten, Minimum 0.55mm BMT G550	Any	0.75mm BMT G550	10g-15x16mm needle point flat head screw	Class 3 corrosion protection
	Timber#	Up to 300	0.75mm BMT G550	10g-12x25mm Type 17 wafer head screw	Class 3 corrosion protection
		500		10g-12x35mm Type 17 wafer head screw	

Note: Fastener allocation is for 'A2' coated steel only. Refer Stratco if alternative material options are to be used.
#Fixing to Timber Notes: Screws into seasoned timber only. Minimum MGP10 or F7 stress grade. Minimum timber edge distance = 25mm. Minimum timber batten depth = 45mm. Prebore hole to suit shank diameter.

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Installation Recommendations

For cladding spanning horizontally, the Interlock panels shall be installed with top edge being the 'male' detail. Hence, horizontal Interlock panels are typically installed from top to bottom.

Interlock wall sheeting spanning vertically may be used on angled wall facades.

Horizontal Interlock sheeting is not recommended for angled wall facades due to the potential for water ponding within the shadowline gap.

Interlock sheeting is not suitable for end lapping.

Figure 3.0: Vertical Span

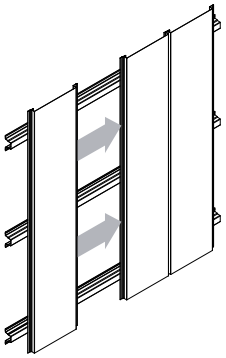
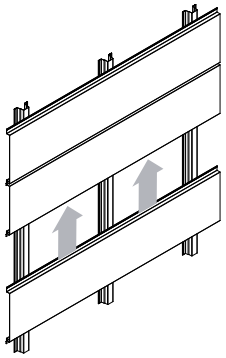


Figure 4.0: Horizontal Span



Fixing Recommendations

Exposed Fix

At each supporting member, screw fix within the shadowline gap. Ensure the screw engages both legs of each adjoining Stratco Interlock panel.

Concealed Fix

At each supporting member, screw fix the supplied retention clip together with the leg of the 'female' side of the Interlock panel.

Figure 5.0: Fixing Detail

Figure 6.0: Standard Exposed Fixing Details
Screw As Specified

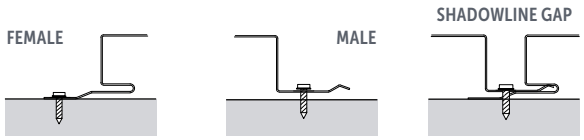


Figure 7.0: Shadowline Gap Range Between Panels

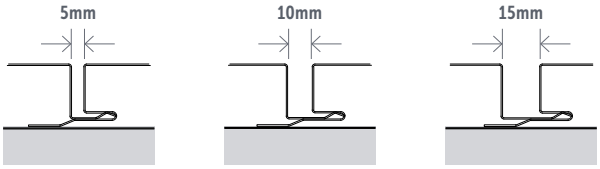


Figure 8.0: Stratco Retention Clip Detail
Used In Concealed Fix Applications Only

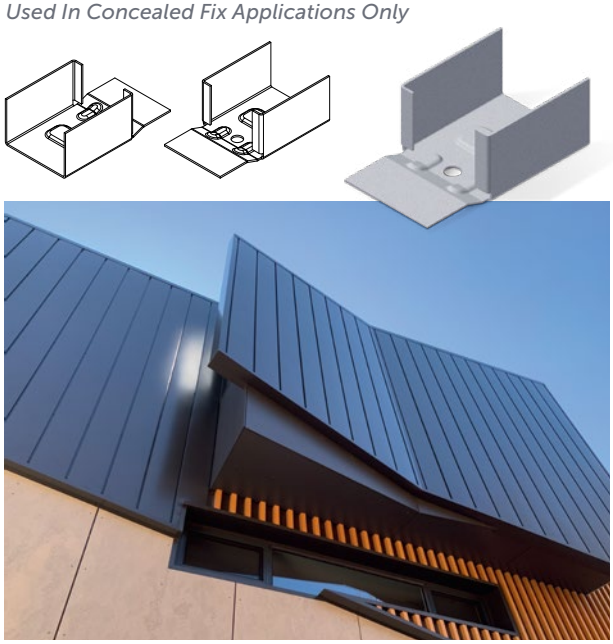
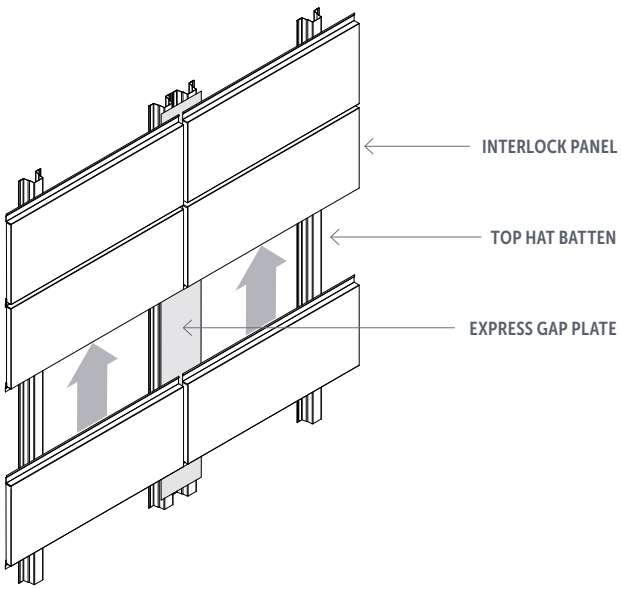


Figure 9.0: Express Gap Plate
Waterproof Membrane Excluded For Clarity



Fixing Recommendations

Figure 10: Express Gap Plate Detail

Waterproof Membrane Excluded For Clarity

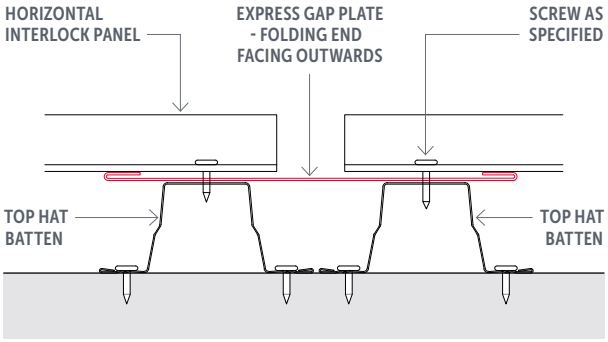


Figure 11.0: Top of Facade Capping Detail

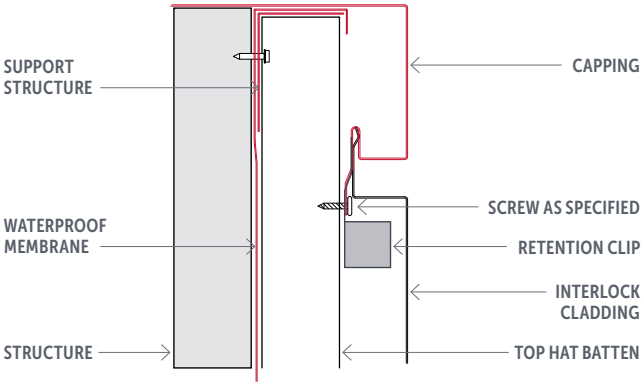


Figure 12.0: Bottom of Facade Moulding Detail

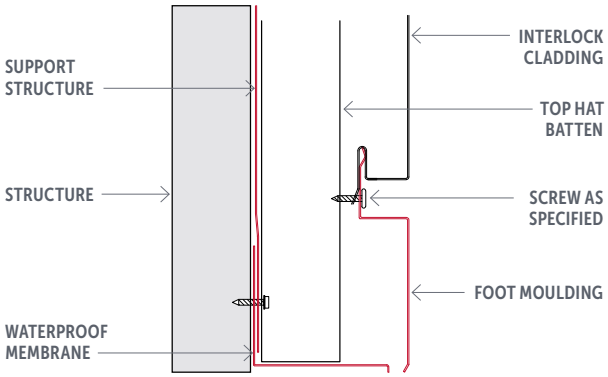
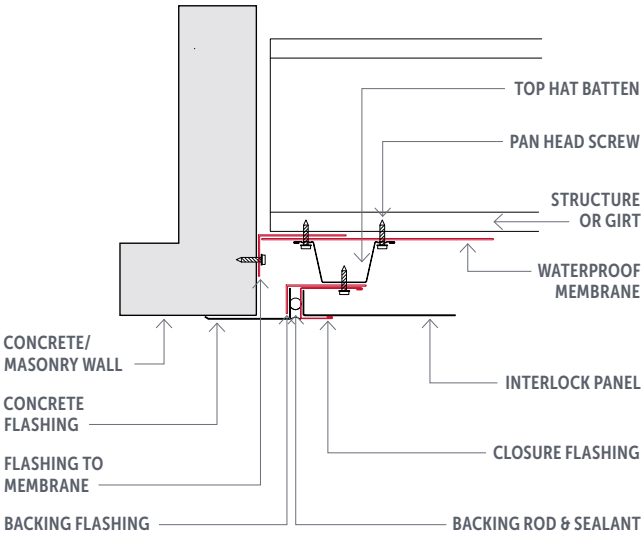


Figure 13.0: Side of Facade Flashing Detail



Flashings

Corner Panels

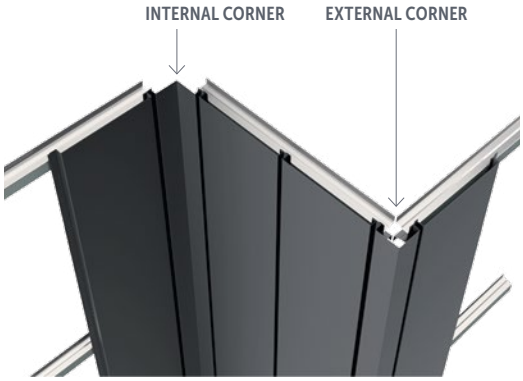
Mitred corner details can be custom made to allow horizontally mounted panels to continue seamlessly around external corners, maintaining a smooth appearance. Vertically installed panels meeting at external or internal corners can be joined with a custom folded corner panel to continue the flow of panels around the corner.

Figure 14.0: Mitred Corner & Folded Stop End

Figure 15.0: Folded Stop End Detail

Figure 16.0: Mitred Corner Detail

Figure 17.0: Internal & External Corner Representation



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Flashings

Figure 18.0: Internal Corner Wall Flashing Detail
Plan View

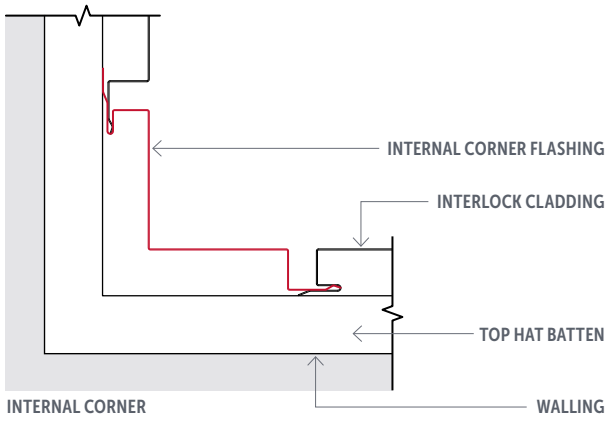
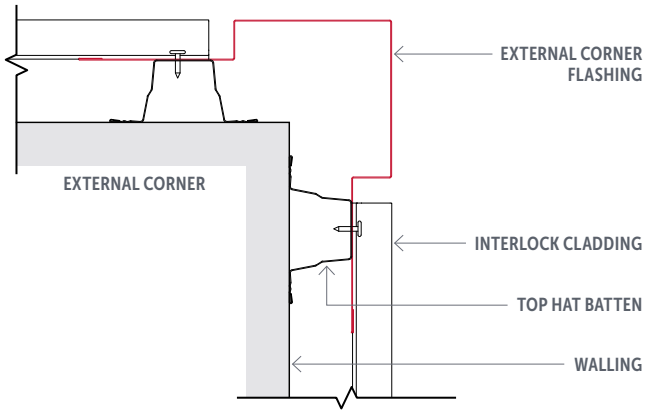


Figure 19.0: External Corner Wall Flashing Detail
Plan View



Flashings Around Openings

Vertical Span

Figure 20.0: Flashing Around Opening - Vertical
Front View

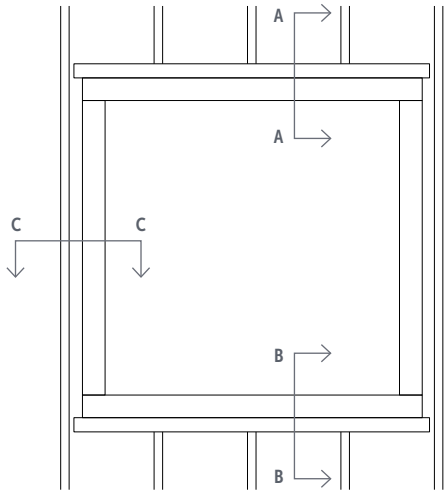


Figure 21.0: Section A-A Head & Sill Flashing To Be Turned Up And Down Behind Jamb Flashing
Waterproof Membrane Excluded For Clarity

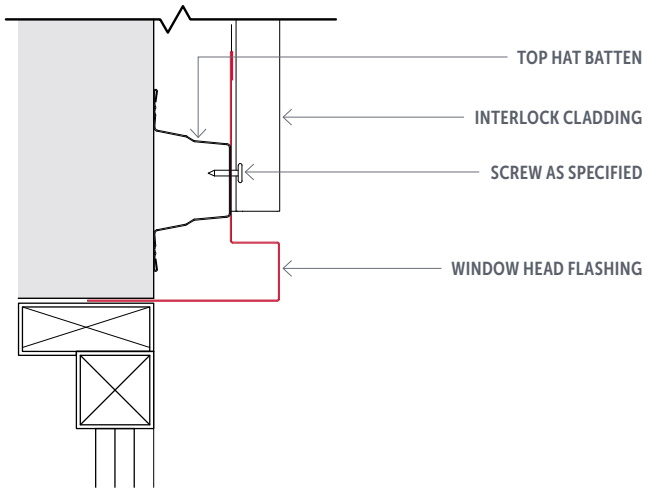


Figure 22.0: Section B-B
Waterproof Membrane Excluded For Clarity

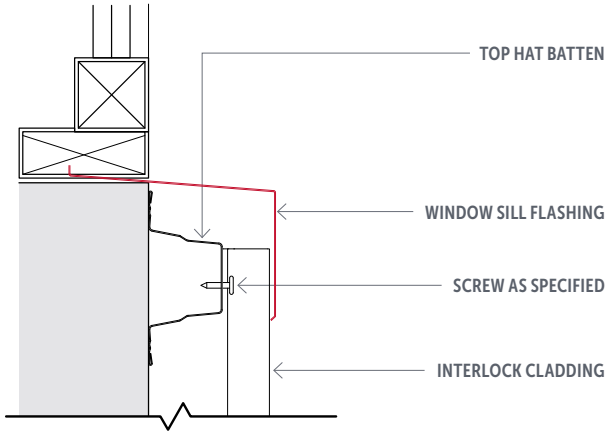
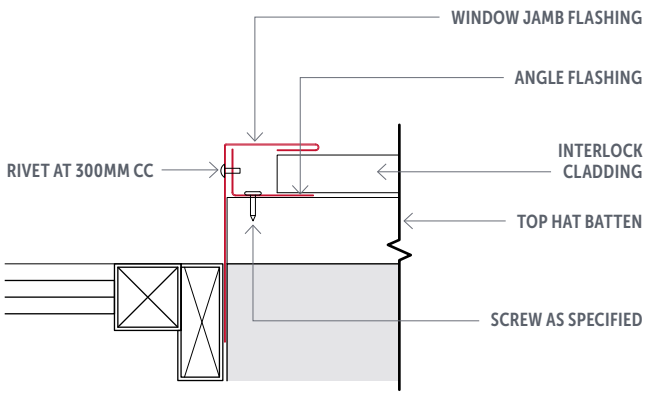


Figure 23.0: Section C-C Flashing Fixed Prior To Panel, If Not Fixed Through Express Joint
Waterproof Membrane Excluded For Clarity



Flashings Around Openings

Horizontal Span

Figure 24.0: Flashing Around Opening - Horizontal
Front View

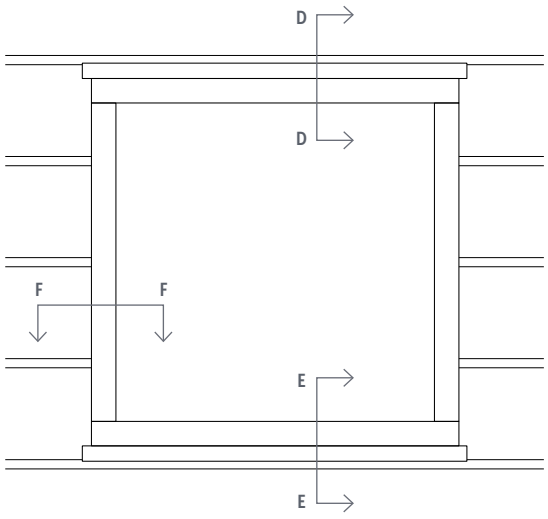


Figure 25.0: Section D-D Head & Sill Flashing To Be Turned Up And Down Behind Jamb Flashing
Waterproof Membrane Excluded For Clarity

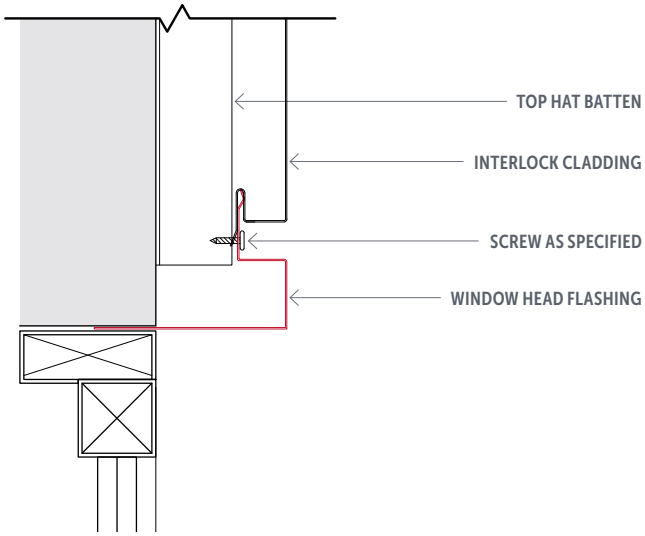


Figure 26.0: Section E-E
Waterproof Membrane Excluded For Clarity

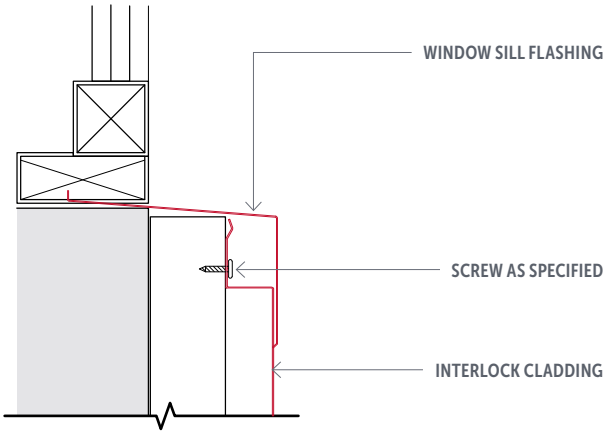
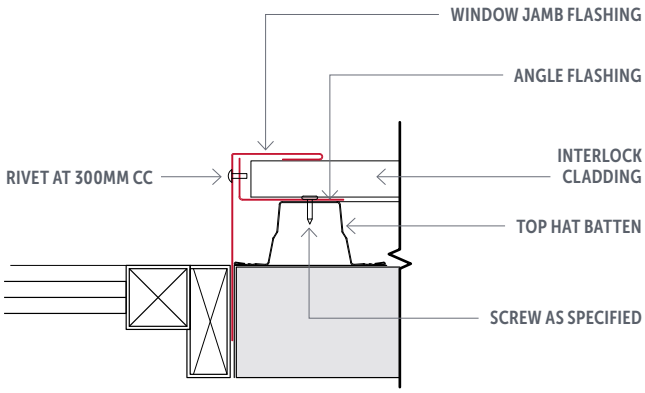


Figure 27.0: Section F-F Flashing Fixed Prior To Panel, If Not Fixed Through Express Joint
Waterproof Membrane Excluded For Clarity



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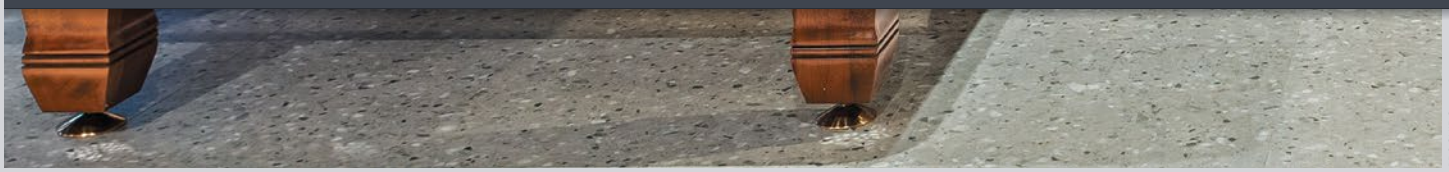

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