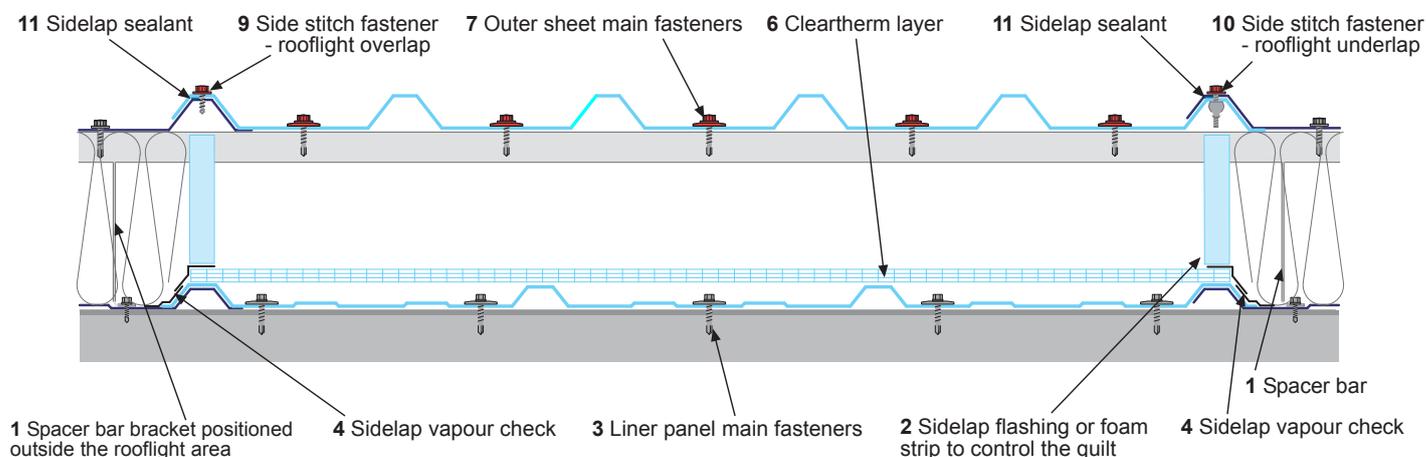


INSTALLATION INSTRUCTIONS : In-Plane Site Assembled GRP Rooflights

Triple Skin with Cleartherm - Trilite 1.8, Trilite 2.4 and Trilite 3.0

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Cross Section: Cleartherm Triple Skin Rooflight

GENERAL ARRANGEMENT

- SPACER BRACKET POSITIONING & CLEARTHERM SHEET LENGTH** - Generally, spacer brackets are positioned outside of the area of rooflight, necessitating the use of 3m spacer bars. Cleartherm sheets are normally fitted in standard 6m sheet lengths butted up to one another for lowest cost. (Butt joints between sheets do not need to be aligned with purlins or laps in the liner or outer sheet). Or, spacer bar brackets can be positioned as normal within the rooflight area (avoiding the need for longer spacer bars). Cleartherm sheets should then be fitted in single span lengths, butted together along the line of the spacer bar with the end of the sheet notched to clear the spacer bar bracket.
- FIXING SEQUENCE** - Either, Cleartherm is laid and secured over the liner panel (after the liner has been fitted as normal): the spacer bar system, fillers and/or flashings to stop insulation migration are then fitted as normal. Cleartherm sheets should not be exposed to weather before the outer sheet is fitted. Or, the Cleartherm sheet can be installed at the same time as the outer sheet, simply sliding into position under the spacer bars: limiting sheet lengths to double spans may assist with this.

LINER PANEL

- MAIN FASTENERS - LINER PANEL** - Stainless steel 5.5mm diameter fasteners either fitted with a large diameter (29/32mm) washer with bonded seal or passing through brackets. * see over for typical references. Liner panels should be secured with 5 fasteners at each purlin and should extend a minimum of 50mm beyond the fixing line at each end after allowing for on site tolerances. Fixed spacer bar brackets can be regarded as a single fastener.
- SIDELAPS - LINER PANEL** - Both sides of the liner panel should lap over the adjacent metal sheet. Apply 50mm wide film backed butyl tape over laps to prevent opening, improve resistance to impact and achieve good airtightness and vapour control.
- ENDLAPS - LINER PANEL** - Endlaps should be sealed with a 6x5mm strip of pale coloured butyl mastic (BMDS:Class A) inside the lap, along the line of the fasteners or alternatively with 50mm wide film backed butyl tape over the lap.

CLEARTHERM LAYER

- Cleartherm can be laid in place after the liner has been fixed and sealed, simply secured with 50mm film backed butyl tape along each side lap. Or, 9x3mm sealant can be applied to the crown of each side corrugation of the liner panel and the Cleartherm layer placed on top.

OUTER SHEET

- MAIN FASTENERS - OUTER SHEET** - Stainless steel 5.5mm diameter fasteners fitted with a large diameter (29/32mm) washer with bonded seal, located in the centre of the top flange of the Ashgrid bar, zed spacer or equivalent, typically poppy red colour. There should be at least five main fasteners per purlin, fitted in the trough, max. 200mm apart; usually this necessitates one fixing per trough. Do not over tighten fasteners. Do not use lightweight washers. * see over for typical references.
- ENDLAP SEALANT - OUTER SHEET** - Endlaps should be sealed with 2 rows (6x5mm section) of UV stable pale coloured cross linked butyl mastic (BMDS:Class A). This should be positioned above and below the line of fasteners, no more than 25mm from the line of the fasteners. If a seal is required at the tail of the lap, gun applied silicon (ISO11600-F-25LM) should be used.
- SIDE STITCH FASTENER - ROOFLIGHT OVERLAP** - Brett Martin Daylight Systems recommend GRP overlaps the metal on both sides if possible. This reduces the cost of fasteners and the number of fastener types on site, and improves ease of installation. Standard stitching screws should then be fitted at 300mm to 400mm centres. Use of stainless steel fasteners is recommended, typically poppy red colour. * see over for typical references.
- SIDE STITCH FASTENER - ROOFLIGHT UNDERLAP** - If it is necessary for the GRP to underlap the metal on one side, expanding rubber bolts should be fitted at 300mm to 400mm centres. Use of stainless steel fasteners is recommended, typically poppy red colour. * see over for typical references.
- SIDELAP SEALANT - OUTER SHEET** - Single strip (6x5mm) of UV stable pale coloured cross linked butyl mastic (BMDS:Class A) - positioned on the crown of the sheet just outside the line of sidelap fasteners.

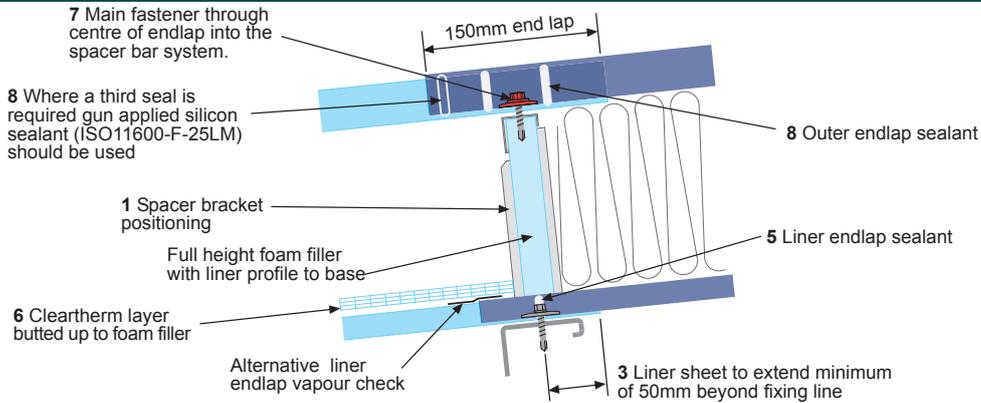
Correct installation of rooflights is important to ensure they achieve the correct level of safety performance and give long term weather tightness.

Minimum Design Roof Pitch 5.5° / Finished Roof Pitch 4°

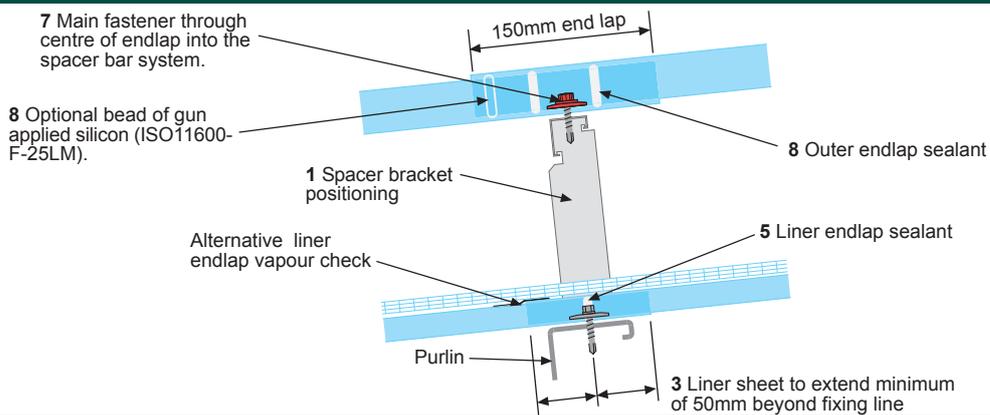
BS5427, the British Standard "Code of practice for the use of profiled sheet for roof and wall cladding on buildings" recommends a minimum finished roof pitch of at least 4°, with a minimum design pitch of 5.5° to allow for tolerances and onsite variations, when using any profiled roofing systems with either through fixings or endlaps (see BS5427:2016 section 5.1.3). We recommend that all Trilite in-plane rooflights should be installed in accordance with these BS5427 recommendations. If Trilite sheets are fitted at lower than 4° finished roof pitch, there will not be any detrimental effect on the rooflight sheet itself, but the risk increases of small variations in installation details causing leaks at endlaps or fixings, as detailed in BS5427 (see Note 3 to 5.1.3). Trilite Ultra rooflights are more rigid, providing more even compression of sealants and less localised deflection around fasteners, thus reducing risk of leaks at endlaps or fixings and should be considered for use on applications near BS5427 minimum pitch recommendations.

Manufacturer	SFS	EJOT
Main Fasteners - Outer sheet	SX3/15-S29-6x40	CF29-JT3-3-5.5 x 32
Overlapping Side Stitch	SXP3/12-A16-6x35	CF15-JT3-2H-5.5x30
Underlapping Side Stitch	LL-S-S16-9.5x25+cap	-
Main Fasteners - Liner Panel	SX3/9-S29-6x29	CF29-JT3-3-5.5 x 32

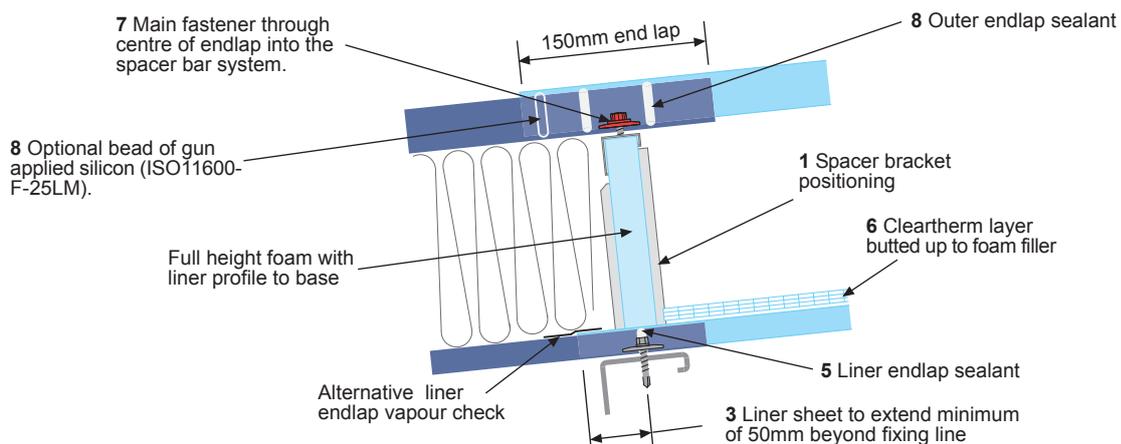
ENDLAP - CLADDING OVER ROOFLIGHT



ENDLAP - ROOFLIGHT TO ROOFLIGHT



ENDLAP - ROOFLIGHT OVER CLADDING



ESSENTIAL HANDLING & STORAGE RECOMMENDATIONS refer to:
Technical Bulletin 154: for GRP and Technical Bulletin 140: for Cleartherm (polycarbonate)

