

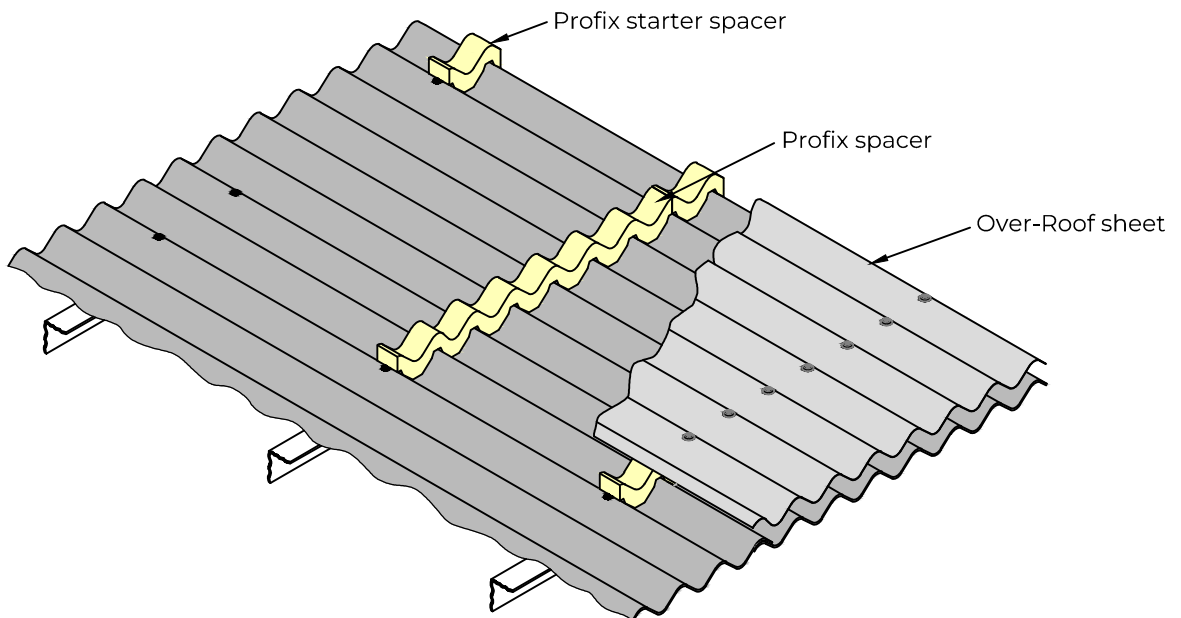
## APPLICATION GUIDE

### Over-Roof with Profix spacers

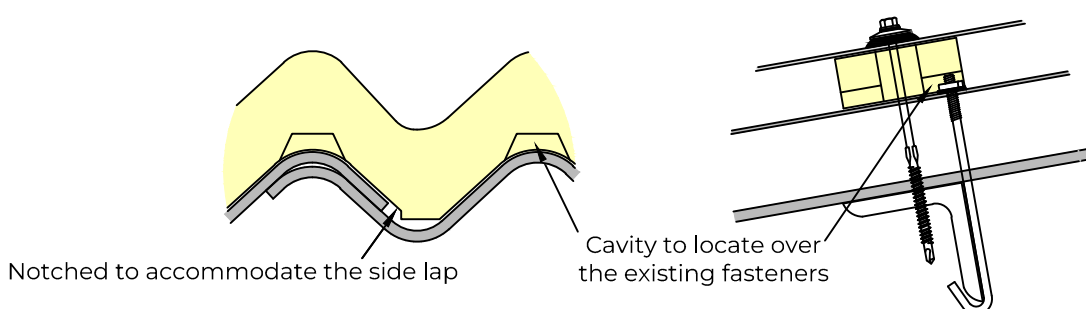
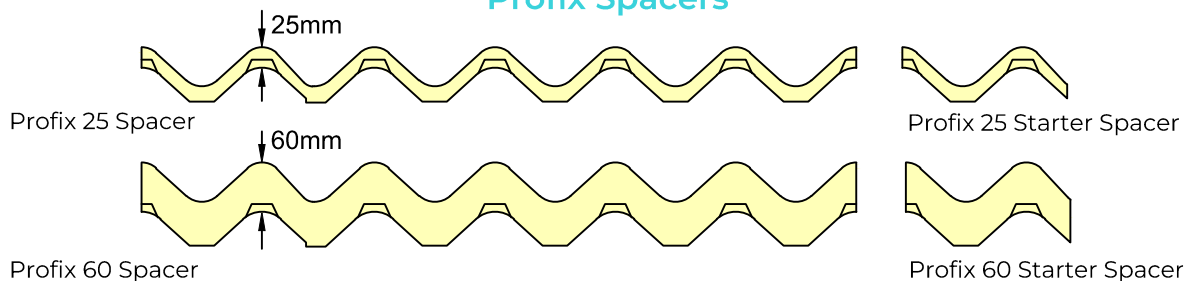
The Filon Over-Roof system is comprised of opaque, profiled Glass Reinforced Polymer (GRP) sheets for the main roof areas and translucent GRP sheets for any rooflight areas. The Filon Over-Roof sheets match the profile of the existing roof sheets.

Filon Profix, polyethylene double profiled spacers match the existing roof sheet profile and the Filon Over-Roof sheet profile. Profix spacers have a design feature that allows them to fit over the existing fasteners so that they remain undisturbed.

#### Typical Application



#### Profix Spacers



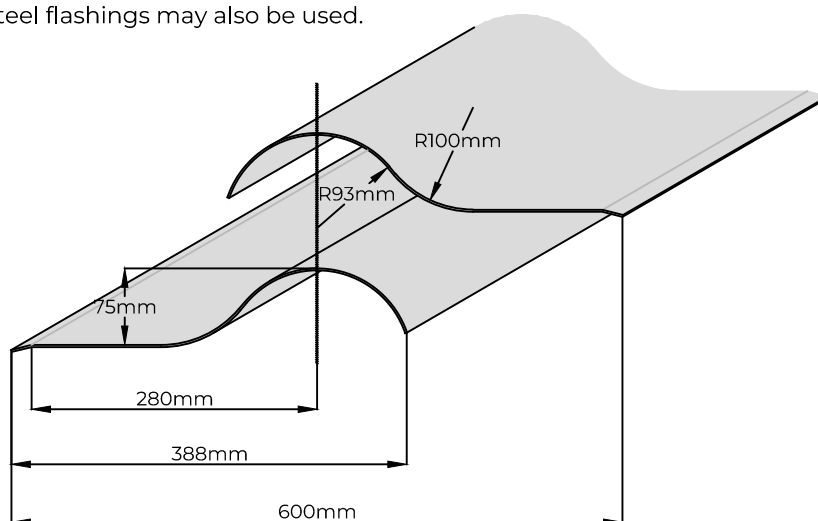
### Flashings

Two Filon ridge flashing types are available in 3.15m lengths: Two-piece, plain wing adjustable flashings to match the industry standard two-piece adjustable close fitting flashings used on older asbestos cement roofs; Filon GRP cranked crown, plain wing flashings to suit close fitting cranked crown flashings with a 900mm girth (3ft), used on more recent asbestos cement and fibre cement roofs. Ridge fillers, supplied by others, are required with Filon GRP plain wing flashings.

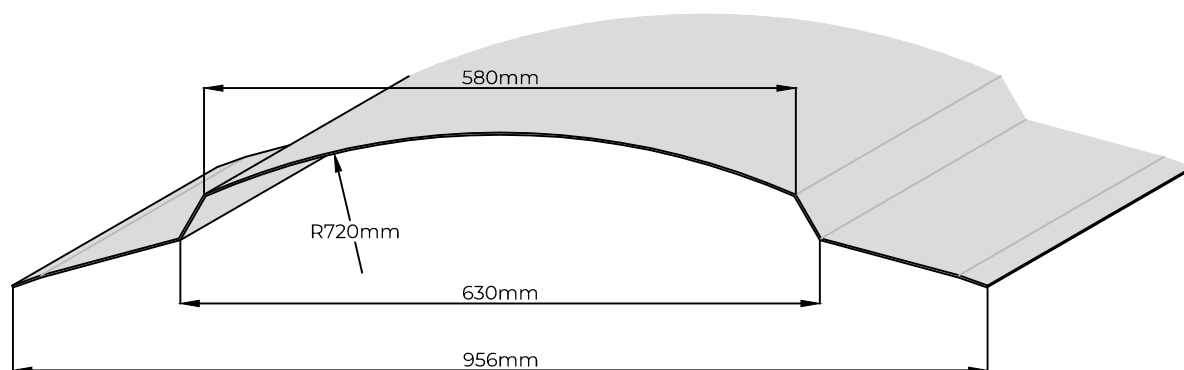
Moulded GRP close fitting cranked crown flashings to suit a 1.8m (6ft), girth are available from others.

Plain wing angled, moulded GRP ridge flashings and aluminium or coated steel flashings by others may be used with the Filon Over-Roof system when appropriate to do so. Ridge fillers, supplied by others, will be required.

Other flashings such as barge boards may be re-used if in good condition and circumstances allow. Moulded GRP, aluminium or coated steel flashings may also be used.



Filon two-piece, plain wing, adjustable flashing for use with industry standard asbestos cement close fitting, two-piece adjustable flashings



Filon cranked crown, plain wing flashing for use with 900mm girth asbestos cement or fibre cement cranked crown ridge flashings

## Filon Over-Roof Sheet Types

Filon Over-Roof sheets are available in a large range of profiles, various thicknesses and reinforcement types to provide the level of load resistance and durability required. Note that actual sheet weight will depend on the profile type, the weights below are approximate.

Over-Roof Sheet Type	Thickness and Nominal Weight	Reinforcement	Application	Durability Guarantee
<b>OP24E for Main Roof</b> <b>CE24E for Rooflights</b>	1.3mm 2.4kg/m <sup>2</sup>	Single Layer	Used for normal roof areas that are not subjected to high wind loads, foot traffic or other abnormal loads. The roof should still be treated as Fragile once installation is completed.	12 years
<b>OPDR24E for Main Roof</b> <b>CEDR24E for Rooflights</b>	1.3mm 2.4kg/m <sup>2</sup>	Double Layered	May be used in areas of higher wind loads or to provide an increased safety factor.	20 years
<b>OPDR30E for Main Roof</b> <b>CEDR30E for Rooflights</b>	1.7mm 3.0kg/m <sup>2</sup>	Double Layered	May be used in areas of very high wind loads or to provide an increased safety factor.	25 years
<b>Opaque Supasafe E for Main Roof.</b> <b>Translucent Supasafe E for Rooflights</b>	2.3mm 4.3kg/m <sup>2</sup>	Triple Layered	May be used to provide optimum safety and load resistance.	30 years

## Fire Performance

Filon Grade 300: B<sub>ROOF</sub>(t4) to BS EN 13501 Part 5.

As standard, Over-Roof sheets are only required to have a B<sub>ROOF</sub>(t4), as the existing roof would be regarded as the liner. For additional requirements, please contact the Filon Technical Department.

Filon Grade 104: B<sub>ROOF</sub>(t4) to BS EN 13501 Part 5.

Filon Grade 101: B<sub>ROOF</sub>(t4) to BS EN 13501 Part 5.

For further information, please refer to Filon Technical Information Sheet: TIS003 England  
TIS003-1 Wales  
TIS003-2 Scotland  
TIS003-3 Northern Ireland

## Typical Fixing Recommendations

Installation of Filon Over-Roof sheeting should always commence at the same end of the roof as the original sheeting. The sheet tiers will therefore be laid in the same sequence and the direction of lay will be the same. Any debris or thick moss growth should be carefully removed before installation commences.

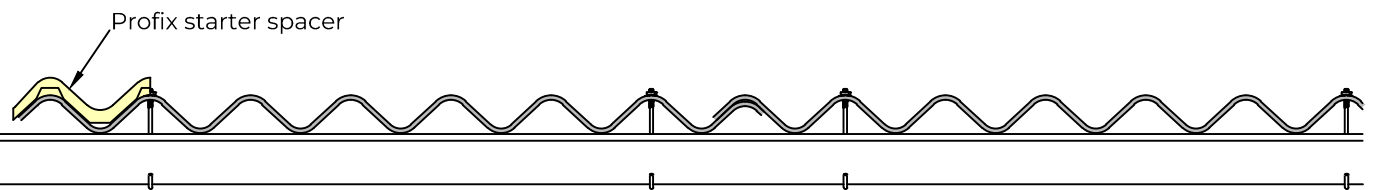
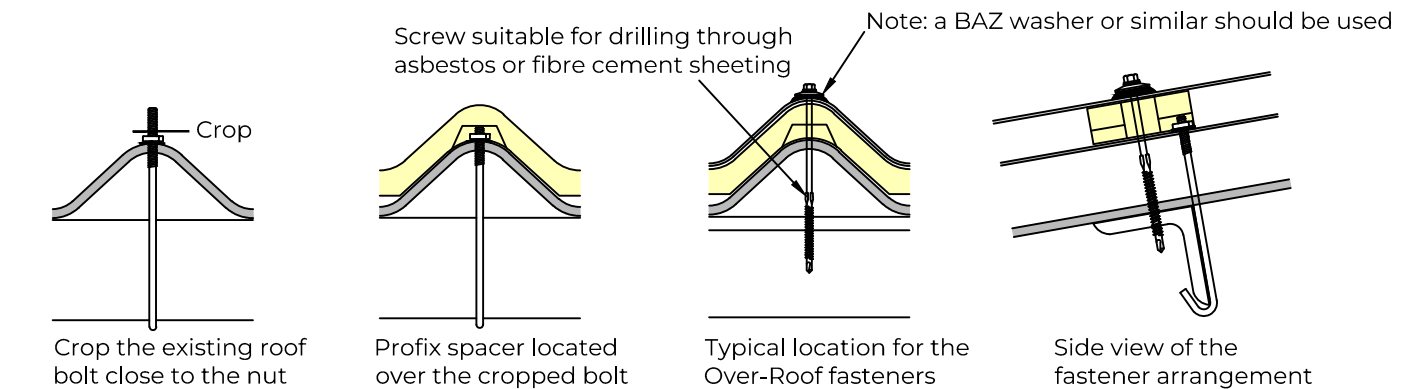
In the event that existing profiled rooflights are to be replaced see the above section, Fire Performance. For replacement of other rooflight types such as patent glazing, contact the Filon Technical Department for advice.

The Profix spacers should be embedded in thick wallpaper paste or similar along the fixing line, see Page 7 for details.

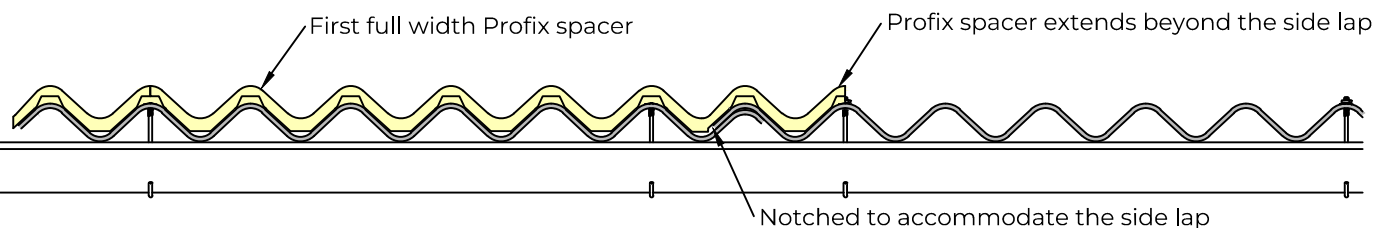
## Typical Fixing Recommendations Continued

Self drill and tap screws are recommended for securing Over-Roof sheets onto steel purlins, but alternative fasteners are available for different purlin types. Contact the Filon Technical Department for details.

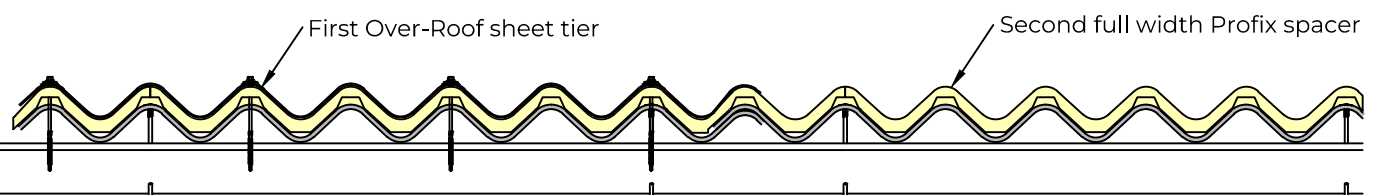
### Typical Fixing Recommendations



Once the purlin line has been carefully and safely cleared of obstructions such as deep moss growth, the existing hook bolts should be cropped close to their nuts and thick wallpaper paste applied along the new fixing line. The Profix starter spacers may then be laid on the purlin lines where sheeting will commence.

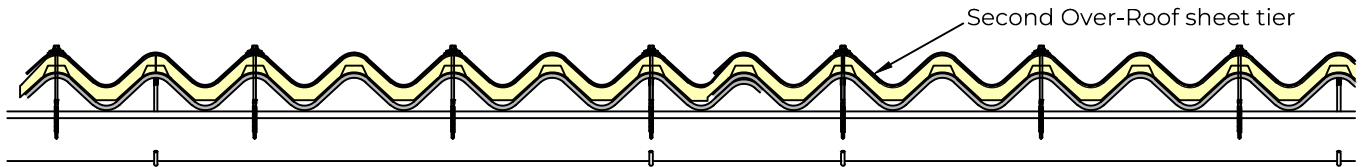


The first full width Profix spacers are butted to the Profix starter spacers and their notched sections will locate over the existing roof sheet side lap and will extend beyond the side lap.



The first sheet tier may be laid and fixed with end laps sealed as shown on Page 7 and the next full width Profix spacer may be placed in position.

**Typical Fixing Recommendations**



The second sheet tier should be laid and fixed and the side lap stitched and sealed as shown below. The laying sequence then continues across the roof. Once the Over-Roof sheets are installed the ridge flashings may be fixed as shown on Page 6 along with any other flashings such as barge boards.

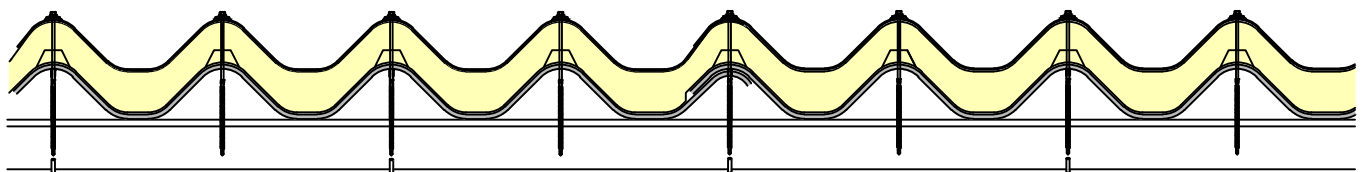
Frequency of fasteners may depend on the Over-Roof sheet type, purlin spans, wind loads and profile type.

Big Six profiled Over-Roof sheets may be fixed at alternate corrugations in general roof areas as shown above, to standard spanning purlins on roofs with normal exposure. For roofs that are subject to high wind loads or in roof areas that have high local loadings such as at the ridge, eaves or at verges, fasteners should be located at every corrugation. Fasteners should also be located at every corrugation at end laps.

Profiles with a pitch exceeding 150mm between the corrugations such as the example below, should be fixed at every corrugation in all areas.

Standard 3" profiled Over-Roof sheets may be fixed at every third corrugation in general areas and at alternate corrugations at end laps and areas of high local loadings.

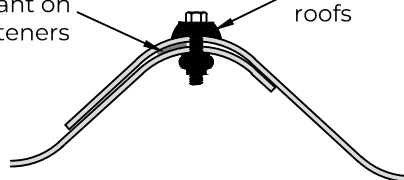
Please contact the Filon Technical Department for assistance if required.



**Typical Side Lap**

Continuous run of 6mm bead or 6mm x 5mm tape, cross-linked butyl mastic sealant on the weather side of the stitch fasteners

Expanding grommet stitch bolts @ maximum 450mm centres or 300mm centres on exposed roofs

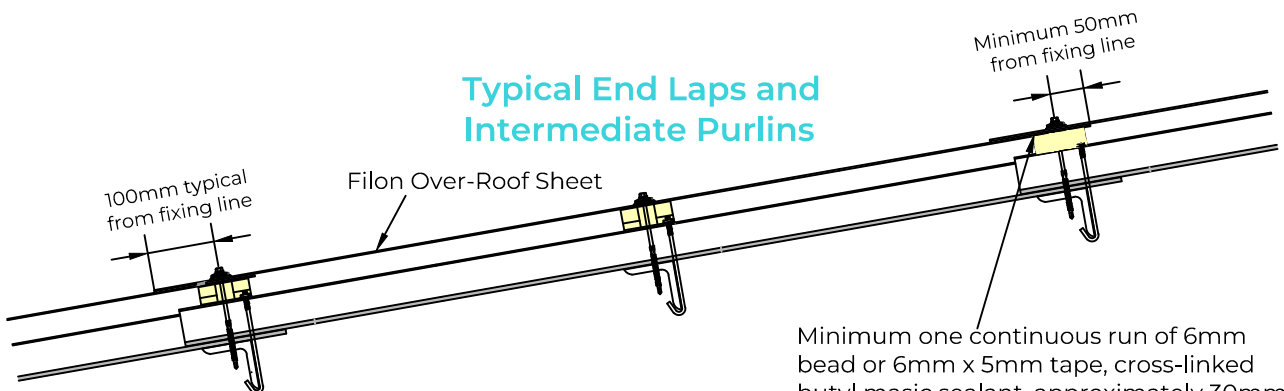


**Typical End Laps and Intermediate Purlins**

100mm typical from fixing line

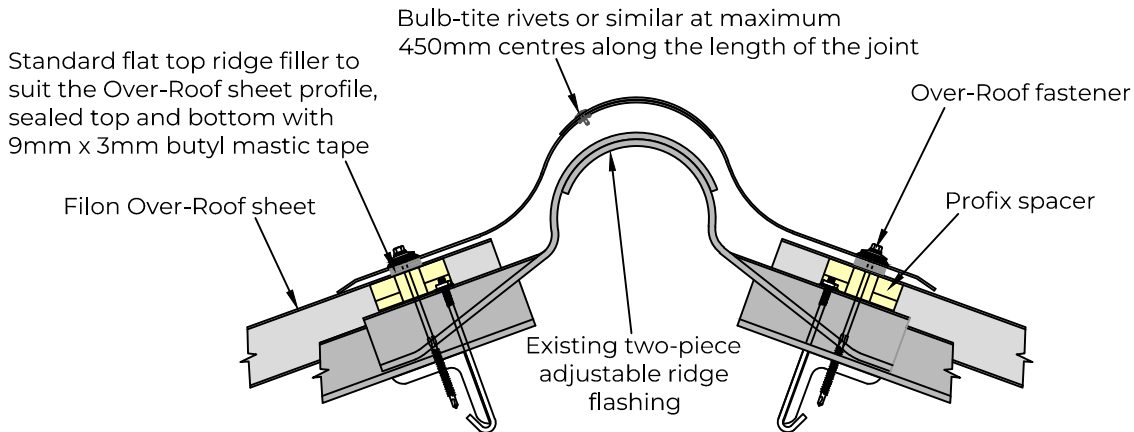
Filon Over-Roof Sheet

Minimum 50mm from fixing line



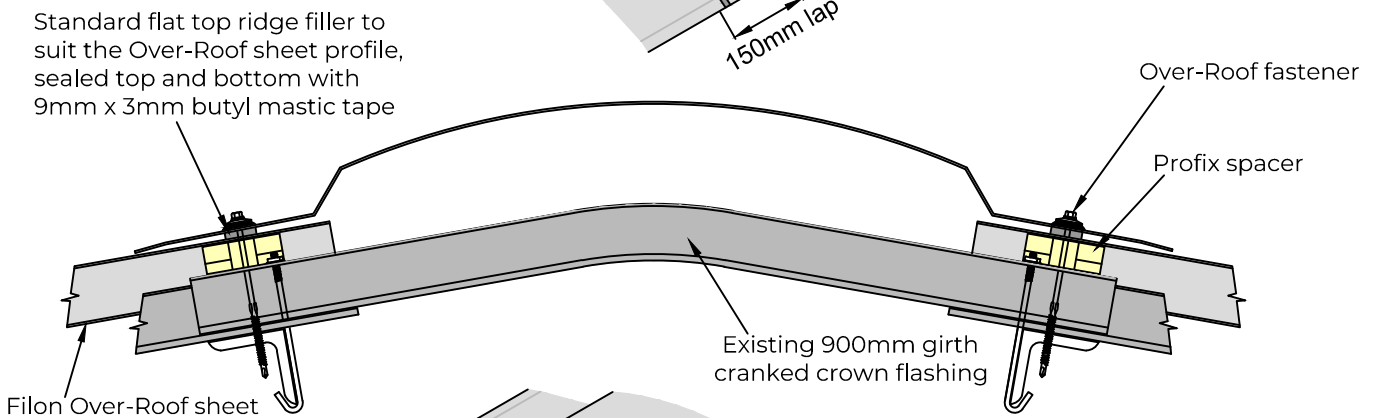
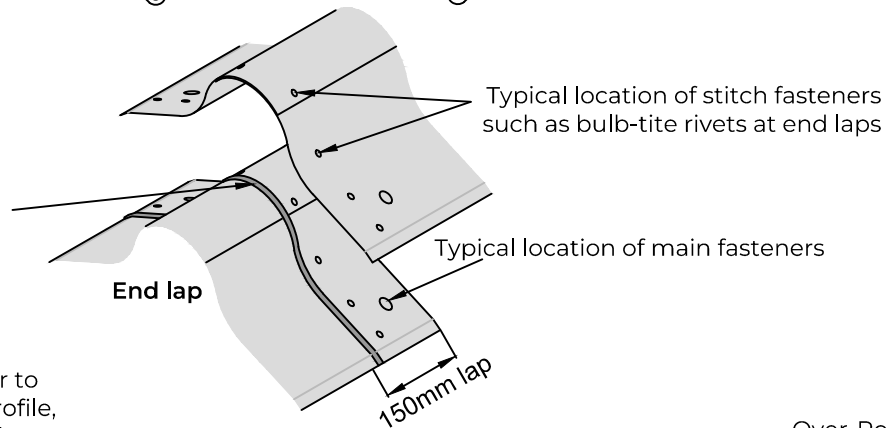
Minimum one continuous run of 6mm bead or 6mm x 5mm tape, cross-linked butyl mastic sealant, approximately 30mm downslope from the main fixing line

Typical Fixing Recommendations



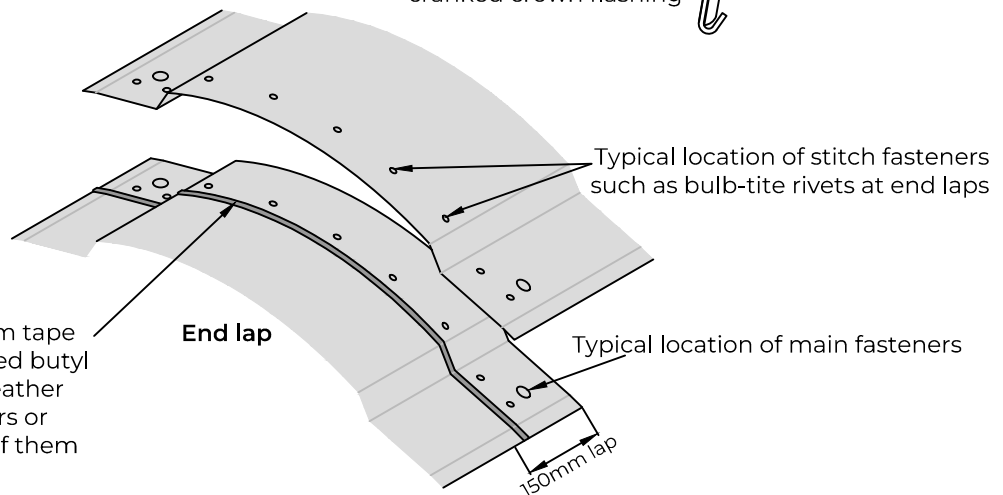
Typical Two-Piece Ridge Flashing Detail

Single run of 9mm x 3mm tape or 4mm bead, cross-linked butyl mastic sealant on the weather side of the stitch fasteners or two runs on either side of them



Typical Cranked Crown Ridge Flashing Detail

Single run of 9mm x 3mm tape or 4mm bead, cross-linked butyl mastic sealant on the weather side of the stitch fasteners or two runs on either side of them



## Transport and Storage

Sheets are normally supplied loose. Store sheets on flat, clean, level battens at approximately 1.5m centres. Stacks should not exceed 1m in height and must not overhang excessively at ends. Protect against theft and from being blown away. Always protect sheets stored outdoors with opaque waterproof covers.

## Health and Safety

When cutting or machining with power tools, operators should wear suitable dust masks and goggles and other appropriate PPE. See Filon Technical Information Sheet **TIS010, COSHH Data**, for more information.

Do not walk on sheets, always use crawling boards and other safe access equipment. Although the Filon Over-Roof system will provide additional strength to the old roof, for the purpose of future maintenance the roof should still be regarded as fragile. See the Advisory Committee for Roofsafety publications **ACR[CP] 002, Guidance Note for Safe Working on Fragile Roofs or roofs with fragile elements** and **ACR[CP]001, Recommended Practice for Work on Profiled Sheeted Roofs**.

## Drilling Through Old Asbestos Cement Roofs

Asbestos cement roofs on existing buildings do not generally litter asbestos fibres into the buildings that they cover. The asbestos fibres are encapsulated by cement and will remain in this inert form until the building is demolished or the roof sheets are damaged or removed.

When drilling through asbestos cement most of the swarf that is generated will travel up the drill shaft and out into the external environment. To overcome this, guidelines recommend the use of thick wallpaper paste which should be applied to the area of asbestos cement sheet to be drilled. The swarf that travels up the drill or screw will be encapsulated within the paste. Self drill/tap screws may be inserted with the fixing gun set at a low speed until penetration through the asbestos cement sheet when the gun speed can be adjusted to drill into the purlin. There are other measures that may be taken such as the use of drills with suction devices fitted. When the drill or screw penetrates the bottom surface of the asbestos cement sheet a small amount of debris may fall onto the purlin. As the debris from the bottom sheet surface is cement rich, any asbestos fibres that may be present will be contained within the cement. Please refer to the HSE publication **a9 Asbestos Essentials** for more information.

Over-roofing with the Filon system provides minimal risk of asbestos fibres being released compared with the alternatives and air tests conducted during installation of a Filon over-roof confirm that there was no increase in fibre content. When removing an existing asbestos cement roof for replacement with a new roof, the old sheets may crack or break thus releasing asbestos fibres. The application of liquid coating systems or similar require that the roof is thoroughly cleaned first, a process that can also result in the release of fibres. The Filon Over-Roof system avoids those risks.

## Supply

Filon supplies the Over-Roof sheets, Profix spacers, GRP rooflights and ridge flashings if suitable for the application. Fasteners, lap sealants, insulation, flashings that are not in the Filon range and any other accessories are supplied by others.

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