INSTALLATION GUIDE - PMR

These installation procedures are based upon our experience of installing Silent Roof Material (SRM) over a number of years to a variety of roof surfaces. This guide is under constant revision to reflect best practices.

The guide concentrates on the installation of SRM to Profile Metal Roofing (PMR) structures but the methods used are applicable to ALL wide span hard surface roof structures.

The installation procedure should be followed as closely as possible where your particular roofing structure allows.

In basic terms, the individual lengths of SRM are rolled out across the roof surface and ‘stitched’ together using plastic cable ties. Ensure that the ties used are suitably UV stabilised to withstand long exposure to sunlight in your particular geographic location. The ‘stitched’ lengths form a continuous matting over the entire roof area. Note that the smooth side of the SRM must face uppermost. The matting is secured at the periphery and gutter locations utilising a clip and tie combination. Retaining wires are then employed at frequent intervals across the entire structure. A mesh securing cover is then installed to provide additional protection to the installation, this is in turn secured to the periphery of the building and to the retaining wires. An overhang of SRM at the roof edges should be allowed so that the SRM enters into the rain water gutter of the roof where possible.

The following pages should adequately illustrate the major points of the installation process, if in doubt, ask.

Typical PMR roof structures
Each length of SRM is ‘stitched’ to it’s neighbour using 370 x 3.6mm cable ties at approx 30cm intervals.

The smooth side of the SRM should face uppermost so as to shatter the falling rain drops on impact then allowing the rain water to trickle through the matrix on to the roof surface.

This enlarged view indicates how a cable tie is passed through the loop formed by stitching ties and over the retaining wire so loosely securing the matting to the wire close to one side of the roof ridge.

Anchor devices for the retaining wires will be site specific, see page 7 for examples.

Multiple retaining wires should always be used.

Note that a new length is laid upside down on top of the previous length. This allows for the stitching process to be performed easily. Once the stitching is completed along the entire length, the top layer is simply flipped over allowing the smooth side to face the falling rain. Leave your stitches loose, over tightening will cause buckling of the SRM.
‘Stitching’ Silent Roof Matting Material (SRM)

The graphic opposite shows cable ties looped through adjacent lengths of SRM to form a ‘hinge’ between lengths. The lengths then form a continuous matting across the entire roof area.

The question is

“How tight should these ‘hinges’ be?”

This is a 370 x 3.6mm cable tie used as a ‘hinge’ between two adjacent lengths of SRM. The holes are punched through the SRM at a minimum of 60 to 80mm from the edge when the two adjacent lengths are laid topside to topside. Once the ‘hinges’ are completed along the entire length of SRM, the top length is simply ‘hinged’ over 180 degrees to lie adjacent to the length that was underneath (see previous page). The dimension to note is that shown in RED above, this is the amount of tie that has been pulled through the tie lock which should be minimal when using a 370mm tie. Engage the tie tail in the tie lock, DO NOT pull tight. This ensures that the loop formed by the tie provides sufficient slack in the hinge. When this measurement is adhered to, the adjacent lengths of SRM will have sufficient space for expansion/contraction and will avoid buckling of the overall matting on the roof structure.
Securing the edges.

We utilise a purpose made stainless steel clip shown fitted in situ in the images below. The clip is slipped over the panel edge and secured tightly with the integral bolt. The SRM lies over the clip and is secured to it using a cable tie as shown.

The cable tie is first passed through the SRM at a chosen point ‘A’, then through the SS clip loop and back through the SRM approx 50mm from ‘A’ at point ‘B’ then tied off.

Typical tie lengths are 370 and 430mm

A cable tie is also passed over the retaining wire (Page 5) and through this clip.

We can of course supply the stainless steel clips and cable ties retaining wire/fittings if you cannot obtain similar components locally.
Retaining Wire Installation

As per stated previously, SRM when installed following these instructions will form a continuous matting across the entire roof area. Due to the ‘open lattice structure of SRM, it offers little resistance to wind and consequently minimal uplift. To provide additional securing of the SRM mat to the roof structure, retaining wires must be installed along the edges of the roof where tie/clips have been installed and at intermediary points across the structure. The retaining wires should be tensioned utilising turnbuckle’s or similar. The method of securing anchor points at the ends of the retaining wires will be site dependant.

Distance between SS Clips not to exceed 40cm

Legend
- SRM
- Cable tie
- SS Clip/bolt
- Anchor
- Turnbuckle
- Wire clamp

NOT TO SCALE

The graphic above shows how the retaining wire is anchored at each end (site specific) and tied down to the individual retaining clips using an appropriate length UV stabilised cable tie.

The cable tie must loop over the retaining wire, and through a ‘stitch' tie or retaining clip, DO NOT OVER TIGHTEN.

Images of the various components required for the installation of retaining wires are shown on page 7.

If in doubt please ask, we are always here to help

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silentroofltd.com
For all locations we recommend overlaying the Silent Roof Material with a 100mm x 100mm x 2mm Polyethylene mesh as indicated here.

This mesh is extremely strong and is tied off to the straining wires and SS clips around the periphery of the roof. The mesh can be in 2 or 3m wide strips as indicated here or cover the entire roof structure.

IF IN DOUBT ASK

If in doubt please ask, we are always here to help.
### Fixings for fitting the Silent Roof Material

<table>
<thead>
<tr>
<th>Cable Ties UK</th>
<th>Description</th>
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<tbody>
<tr>
<td>Unit 1 Fox Covert Way</td>
<td>To stitch the material</td>
</tr>
<tr>
<td>Crown Farm Industrial Park</td>
<td>Black 370mm</td>
</tr>
<tr>
<td>Forest Town, Mansfield</td>
<td>For the eves / edges</td>
</tr>
<tr>
<td>Nottinghamshire</td>
<td>Black 450mm</td>
</tr>
<tr>
<td>NG19 0FR 01623 706 241</td>
<td><a href="mailto:sales@cableties-online.co.uk">sales@cableties-online.co.uk</a></td>
</tr>
<tr>
<td></td>
<td><a href="https://www.cableties-online.co.uk/shop/cable-ties/length:370mm/width:4-8mm/colour:black/uv-heat-stabilised-cable-ties.html">https://www.cableties-online.co.uk/shop/cable-ties/length:370mm/width:4-8mm/colour:black/uv-heat-stabilised-cable-ties.html</a></td>
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**Falcon Workshop Supplies Ltd**

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>M6 x 12 Hex Bolt</td>
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<tr>
<td>M6 Long Clip Nut</td>
</tr>
<tr>
<td>For quantity, give them a call to get the best price.</td>
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</tbody>
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<thead>
<tr>
<th>Try <a href="http://www.gsproducts.co.uk">www.gsproducts.co.uk</a> 01384 883 330 <a href="mailto:sales@gsproducts.co.uk">sales@gsproducts.co.uk</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>For most Wire, Wire tensioners, Fixings &amp; Bolts</td>
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<tr>
<td>A variety of strainer wires are available of differing gauges, solid galvanised; PVC coated; stranded rope.</td>
</tr>
<tr>
<td>3mm 7x19 Galvanised Steel Wire Rope is easy to fold on itself to make loops.</td>
</tr>
<tr>
<td><a href="http://www.gsproducts.co.uk/builder">www.gsproducts.co.uk/builder</a> have a custom wire rope assemblies department.</td>
</tr>
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**Tensioners** See https://www.sure-green.com are a useful source for tensioning wire and tensioning ratchets also know as Fencing Radisseurs. There are a variety of turnbuckles depending on the application.

Radisseur, Turnbuckles, (not to scale), Thimble, Wire rope clamp, Anchor plates

UV-stabilised polyethylene mesh, black in colour
2mm twine, 100mm x 100mm

Ideal for installations that are exposed to strong wind. Light in weight but very strong and durable.

Available from https://store.coastalnets.co.uk/collections/large-mesh-

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