

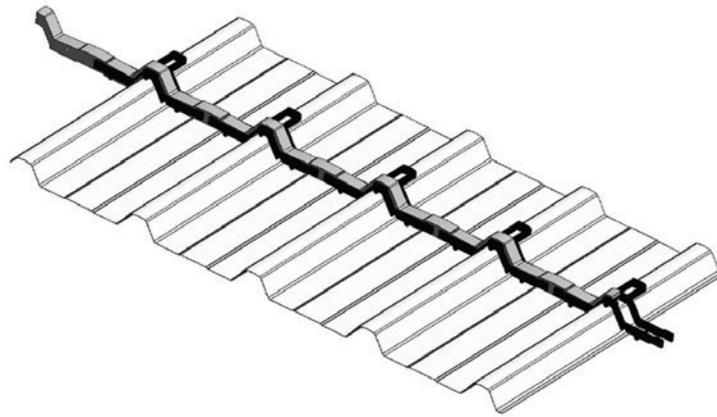
# MONOLAP<sup>®</sup> ROOF LAP JOINT SYSTEM

FOR MONOCLAD<sup>®</sup> ROOF CLADDING

Product Technical Supplement



# SELECTION AND SPECIFICATION



## FEATURES/BENEFITS

- Increased safety
  - smaller roofing crews
  - lighter, shorter sheets to carry
  - smaller pack mass
  - roof sheets easier to lay and handle.
- Low profile seal - enhanced visual roof continuity.
- Economical - low cost solution for long roofs.
- Suits Stramit's Monoclad® cladding profile - for roof slopes as low as 2 degrees.
- Sealed - for enhanced energy efficiency.
- Independently weather tested
  - peace of mind
  - confidence in system.
- Easy to use
  - fast and reliable installation
  - can be installed at any support member along the roof run.
- Advantage at restricted access sites
  - shorter product lengths
  - shorter trucks
  - easier access
  - less storage space.
- Uniform purlin height - no step in supporting structure, no need for structural modification, and no additional purlin.
- High technology materials for structural connections and weather performance.
- Proven materials
  - provide a durable solution
  - preserve normal roof warranty.
- Shorter length sheets
  - lower transport and handling costs
  - smaller site crane required
  - less thermal expansion and contraction.
- Usable in multiple rows - allows long monoslope roofs.

## IMPORTANT NOTICE AND DISCLAIMER

The information contained within this brochure is for general use and information only. Before application in a particular situation, Stramit recommends that you obtain appropriate independent qualified expert advice confirming the suitability of product(s) and information in question for the application proposed. While Stramit accepts its legal obligations, be aware however that to the extent permitted by law, Stramit disclaims all liability (including liability for negligence) for all loss and damage resulting from the use of the information provided in this brochure.

## PRODUCT DESCRIPTION

The MonoLap® roof lap joint is a revolutionary system (patent pending) that changes the way long run roof cladding is designed and installed. It provides a multiple sheet option for long length screw fixed roofing projects that eliminates traditional step joints or the need for long on-site rolled sheets, without compromising the integrity of the roofing structure.

Designed specifically for Stramit's MonoClad® cladding, the MonoLap® roof lap joint system allows the installation of lapped sheets on standard purlin framing, without the need for conventional stepped jointing. The system provides a combination of a strong joint and a weather-resisting seal between lapped sheets.

The system is simply installed by placing onto the bottom sheet with enlarged holes in the ribs. The top, overlapping sheet is then placed over the MonoLap® units, and screwed through both layers to the support below.

The joint connectors and sealing foam are manufactured from high technology materials that provide strength and weather-resistance and preserve the existing roofing warranty.

## APPLICATIONS

The MonoLap® roof lap joint system is specifically and exclusively designed to provide a sealed joint between overlapping sheets of MonoClad® cladding. It is suitable for all applications otherwise suitable for MonoClad® cladding. The unique low-profile overlapping arrangement allows for installation over support purlins that are in a single uniform plane regardless of cumulative roof run length, subject to normal drainage capacity limits.

## MATERIALS

The joint connectors are moulded from DuPont™ Zytel® nylon, a strong material suitable for extreme roof environments. The durable sealing strips are of soft closed cell foam that accommodates sheeting profile tolerances and creates a weather resisting joint.

## THERMAL EXPANSION

All materials change in length in proportion to temperature change. On a very long roof sheet this movement must be accommodated at the sheet ends resulting in stresses and distortions that can lead to problems with fixings and attachments to flashings etc. Dividing a very long sheet run into a series of moderate lengths, with a low-profile MonoLap® roof lap joint system between, will reduce the thermal movement at each sheet end to a substantially lower and manageable value.

## TESTING

Testing for strength and weather resistance has been carried out at the Stramit Research and Development laboratory. Testing was also carried out to investigate the effect of longitudinal sheet movement due to thermal expansion.

## WARRANTY

Stramit MonoClad® roofs, insulated with foil-backed fibreglass blanket, and using the Stramit MonoLap® roof lap joint system, will retain all normal warranties. Contact your local Stramit office for details.

## ARCHITECTURAL SPECIFICATION

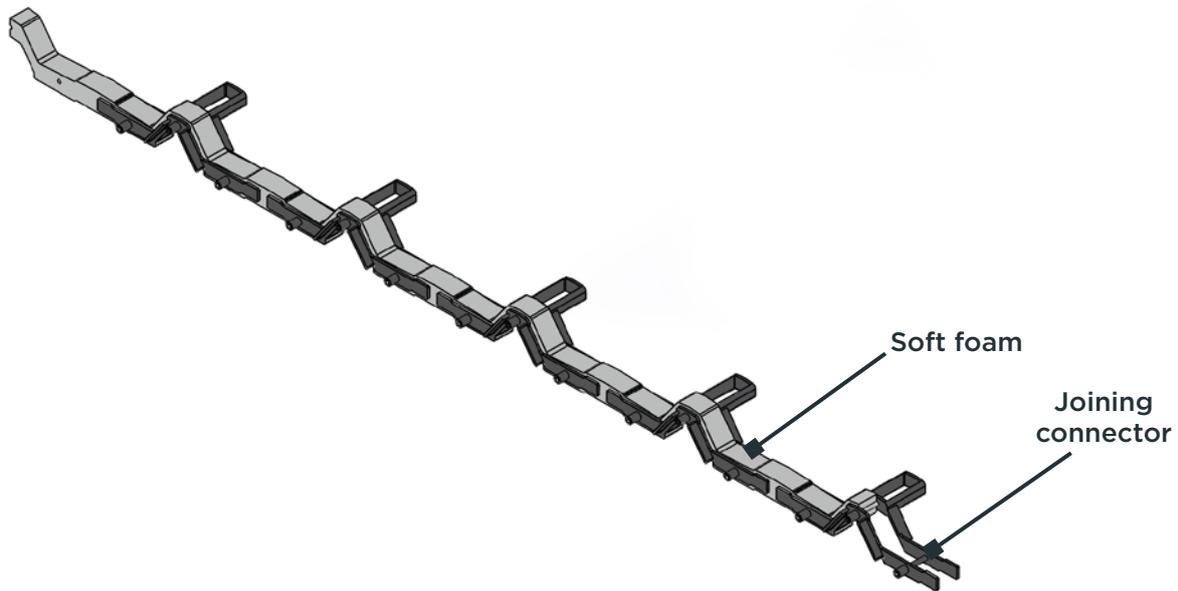
This specification may be added to that of the MonoClad® cladding to ensure that required performance and functional needs are met:

*The Stramit MonoClad® cladding shall be installed in multiple overlapping lengths on a single plane using the Stramit MonoLap® roof lap joint system fixed strictly in accordance with the manufacturer's instructions.*

Where translucent sheeting is also to be used, add the following:

*Translucent sheeting joints that interface with the Stramit MonoLap® roof lap joints shall be constructed using the Stramit MonoSky® joint system, fixed strictly in accordance with the manufacturer's instructions.*

# DESIGN



*Australian Registered Design Patent pending*

## SPANS / PRESSURES

When used with the MonoLap® roof lap joint system, the non-cyclonic and cyclonic spans and pressures provided in the MonoClad® cladding product technical manual and relevant Stramit Design Guides remain unchanged with the following conditions:

- the lapping spans at each joint shall be regarded as end spans for the purpose of determining wind and foot traffic capacity
- The minimum roof slope must be maintained at 2 degrees.

## SUPPORT STRUCTURE

Lap joints using the MonoLap® roof lap joint system do not require purlin step joints. The supporting structural steel can be designed and detailed so that all the roof purlins are in the same plane. Cleats must be arranged to suit purlin spacings consistent with any required change in sheet spacing arising from the Spans/Pressures clause above.

## PENETRATIONS AND OBSTRUCTIONS

No obstruction to the water flow should be placed across the MonoLap® joint, nor should the joint be crushed by any load. All roof penetrations should be at least 1500mm away from the MonoLap® joint.

## TRANSLUCENT SHEETING

Where required, translucent sheeting must be specified to be lapped at the MonoLap® joint using MonoSky® joint system for translucent sheeting. Translucent sheeting for the lower run should be fixed before laying sheeting on an upper run.

# PROCUREMENT

## ORDERING

**Important:** Please note, when ordering Monoclad® cladding for use with the MonoLap® joint, allowance must be made for an additional overlap of 350mm at each lap joint along the roof run length:

- Bottom sheet + 200mm
- Intermediate sheet + 350mm
- Top sheet +150mm

Sheets must be measured to ensure the MonoLap® joint is installed over a supporting purlin.

MonoLap® roof lap rolls for supply with Monoclad® cladding can be ordered from your nearest Stramit location or distributor of Stramit products.

## DELIVERY/UNLOADING

Delivery can normally be made within 48 hours, subject to the delivery location, quantity and material availability, or can be at a pre-arranged date and time. Please ensure that suitable arrangements have been made for truck unloading, as this is the responsibility of the receiver.

## PRICES

Prices for MonoLap® roof lap joint units or rolls (to be supplied with Monoclad® cladding) can be obtained from your nearest Stramit location or distributor of Stramit products. As Stramit does not provide an installation service, ask your tradesperson for a supply and fix price. Contact your nearest Stramit location for the names of suitable tradespersons.

## PACKAGING

MonoLap® can be purchased in pre-joined rolls of units to cover a joint length of 7.62m, packaged in a plastic bag. Please recover bags and dispose of thoughtfully.



## RELATED PRODUCTS

**MonoLap® Roll** - 8 units of Stramit MonoLap® pre-joined together for ease of installation

**Monoclad® cladding** - roof sheeting

**MonoLap® Turn-Up/Down Tool** - for sheet end preparation at MonoLap® joint

**MonoSky®** - joint system for translucent sheeting

**Universal Monoclad® Turn-Up/Down Tool** - for sheet end preparation at ridge and eave

**Ridge Capping** - standard or custom dimensions

**Flashings** - a range of custom flashings

**Filler Strips** - top and bottom; for eaves, ridge and joint sealing

**Insulation & Roofing Mesh** - a range of mesh, Sisalation® foil insulation, plain & foil backed blanket

**Translucent Sheeting** - glass fibre sheeting in a range of shades and densities.

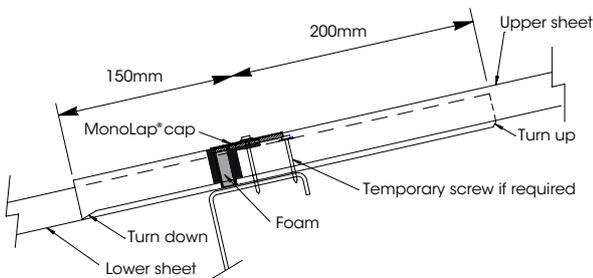
Note that the preferred arrangement for translucent sheeting, when used with the MonoLap® roof lap joint system, requires that the sheet lap is at the same position and is connected using the MonoSky® joint system for translucent sheeting. Contact your nearest Stramit location for details.

# INSTALLATION

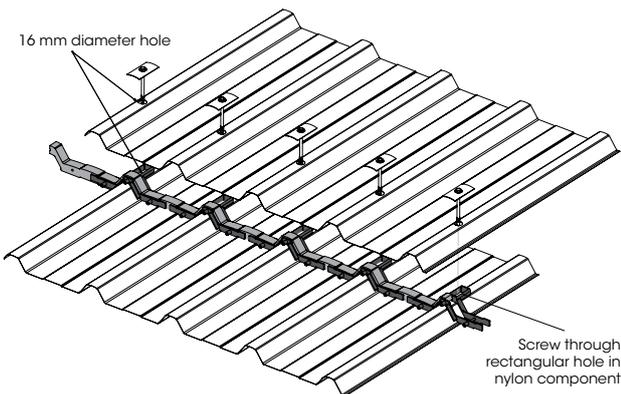
## INSTALLATION PROCEDURE

MonoLap® roof lap joint units are readily installed. It is however important that the roofing sheets at each overlapping joint be carefully aligned. The summarised procedure is:

- 1 Alignment of sheets on the lower and upper runs must be determined before commencing the laying of sheets on the lower run to ensure the ribs match at the joint.
- 2 Place the lower run sheets with 200mm overhang beyond the centre of the support at the joint. Stringline or chalkline to show the centre of the support at this position.

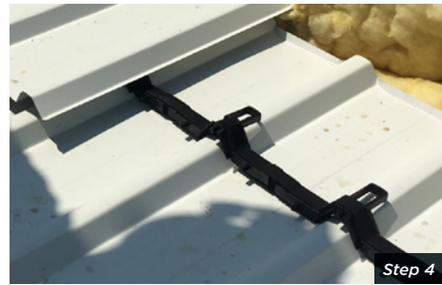


- 3 Screw down the sheeting as per normal practice at all supports except at the joint. Turn up the high ends of the lower sheet in every pan using the MonoLap® roof lap joint turn-up/down tool.



- 4 Position the MonoLap® roof lap joint roll with the centre of the hole in the protruding nylon part over the centreline of the support, and the foam further away from the higher end of the lower sheet.

Join subsequent rolls by unclipping the nylon unit with no foam on one side, inserting the end of the next roll with only foam through the joining pin, then pushing the pins back into the mating holes until it clicks into place. This can be done one at a time before installing the sheets or be connected prior to installation. Where a roll needs to be shortened, it would need to be cut to size.



- 5 Commence the higher sheet run by carefully aligning side edges with the first lower sheet and positioning with an overhang of 150mm. Screw sheeting to all supports except at the joint.

- 6 Drill a 16mm diameter hole at the top of each rib at the string line position at the joint, through both layers of sheet only. Remove any swarf. Turn down the pans of the upper sheet at the joint using the MonoLap® roof lap joint turn-up/down tool.



**7** Position a MonoLap® cap over the 16mm diameter hole. Screw through using a No 12-14x68mm tek screw through both layers of sheeting and into the support below.



**8** Barge capping needs to accommodate the slight rise in the joint area.

An illustrated leaflet is provided with each order containing fixing instructions. Where translucent sheeting is used an installation leaflet is also provided for the MonoSky® joint system for translucent sheeting.



## WALKING

We recommend caution be taken when walking on any roof. When walking on Monoclad® cladding always wear flat rubber soled shoes and place feet only in the pans except at supports, taking care to avoid the last pan or two near edges of the metal roof area.

**Walk only in pans, or on ribs at purlin supports.**

## GOOD PRACTICE

Stramit recommends that good trade practice be followed when using this product, such as that found in Australian Standards Handbook HB39.

## CUTTING

MonoLap® roof lap joint units can be easily cut across the foam section using a retractable box cutter or suitable sharp cutting implement. Do not

cut the nylon connectors at the top, only on the sides or pan area. Please dispose of any off-cuts considerably.

# ADDITIONAL INFORMATION

As well as our standard range of Technical Manuals, Installation Leaflets, Case Studies and other promotional literature Stramit has a series of Guides to aid design.

These include:

- Roof and Wall Flashing Guide
- Roof Slope Guide
- Foot Traffic Guide
- Concealed Fixed Decking
- Bullnosing, Curving and Crimping
- Acoustic Panels
- Cyclonic Areas
- Spring Curving Guide

Please contact your nearest Stramit location for any of these guides or other literature.

## OTHER PRODUCTS

Stramit offers a wide range of building products, including:

- Purlins and girts
- Formwork decking
- Roof and wall sheeting
- Lightweight structural sections
- Truss components
- Gutters and downpipes
- Fascias
- Custom flashings
- Insulating products
- Fasteners

# CONTACT US

Visit [stramit.com.au](http://stramit.com.au) or contact us using the details below.

| REGION    | LOCATION   | CONTACT DETAILS                     | TECHNICAL ENQUIRIES |
|-----------|--|-------------------------------------|---------------------|
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|           | <b>COFFS HARBOUR</b><br>6 Mansbridge Dr, Coffs Harbour NSW 2450  | Ph 02 6656 3800<br>Fax 02 6656 3808 |                     |
|           | <b>NEWCASTLE</b><br>17 Nelson Rd, Cardiff NSW 2285               | Ph 02 4041 3400<br>Fax 02 4041 3423 |                     |
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| SA        | <b>ADELAIDE</b><br>11 Stock Rd, Cavan SA 5094                    | Ph 08 8219 2000<br>Fax 08 8219 2021 | Ph 03 9237 6353     |
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|           | <b>MARYBOROUGH</b><br>10 Activity St, Maryborough QLD 4650       | Ph 07 4123 9500<br>Fax 07 4123 9508 |                     |
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| NORTH QLD | <b>CAIRNS</b><br>53 Vickers St, Edmonton QLD 4869                | Ph 07 4034 6555<br>Fax 07 4034 6511 | Ph 07 3803 9869     |
|           | <b>TOWNSVILLE</b><br>402-408 Bayswater Rd, Garbutt QLD 4814      | Ph 07 4412 3900<br>Fax 07 4412 3909 |                     |
| WA        | <b>PERTH</b><br>605-615 Bickley Rd, Maddington WA 6109           | Ph 08 9493 8800<br>Fax 08 9493 8899 | Ph 07 3803 9869     |

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