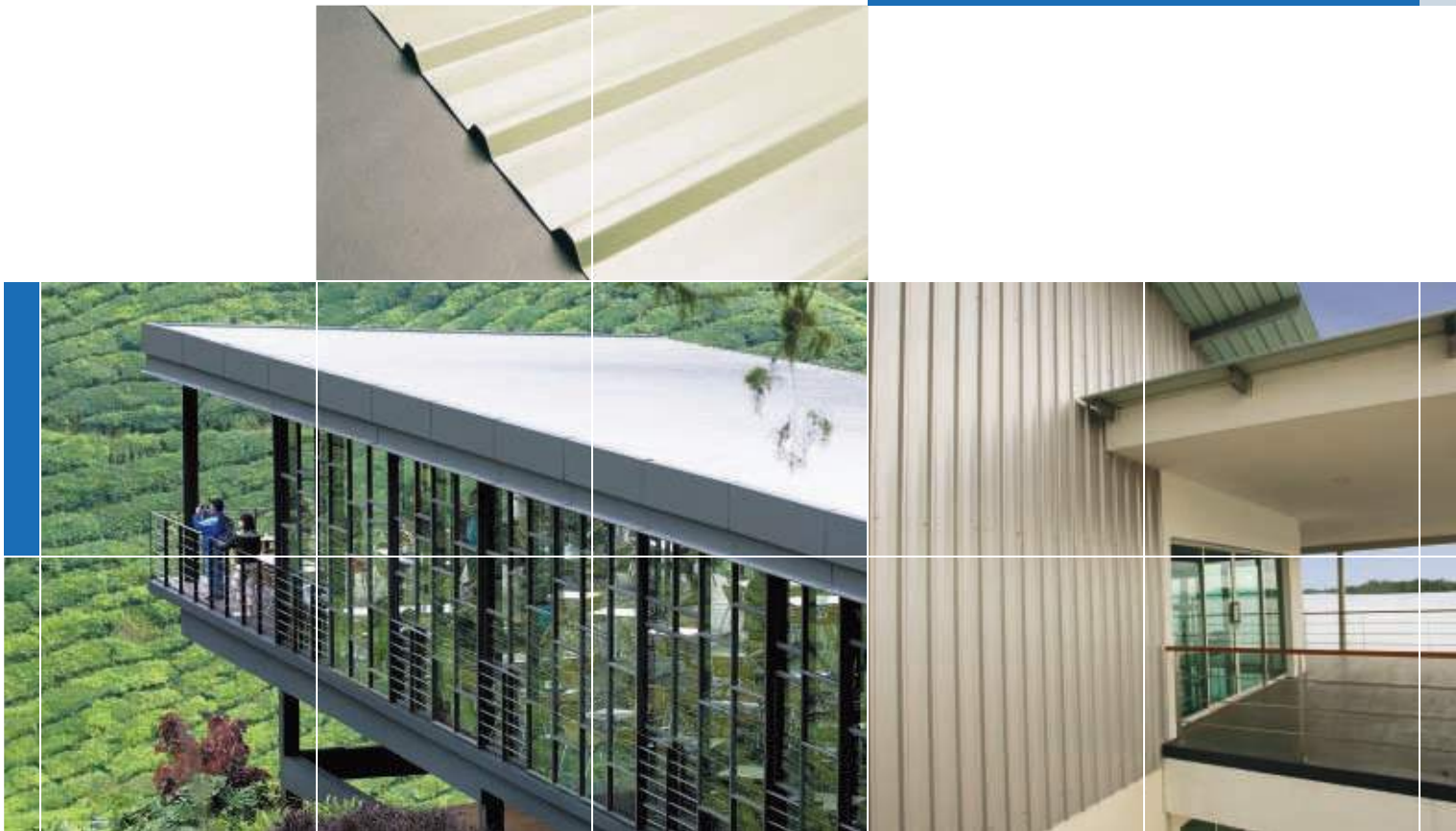


NS BLUESCOPE LYSAGHT SINGAPORE

LYSAGHT® TRIMDEK® OPTIMA™

Installation Guide



Structural Solutions



Roofing & Walling Solutions



House Framing Solutions



LYSAGHT® TRIMDEK® OPTIMA™

Subtle square fluted steel cladding with extra-wide span



INSTALLATION METHOD

| Fasteners with Insulation | | | |
|---------------------------|--|--|---|
| | Fixing to steel up to 0.75mm BMT | Fixing to steel >0.75mm to 3mm BMT | Fixing to timber |
| Crest fixed | Self drilling screws with hex. washer-head & EPDM seal, 12 - 11 x 50 (M5.5 - 11 x 50) | Self drilling screws with hex. washer-head & EPDM seal, 12 - 14 x 65 (M5.5 - 14 x 65) OR 12 - 14 x 68 (M5.5 - 14 x 68) | Type 17 Self drilling screws with hex. washer-head, <i>Softwood:</i> 12 - 11 x 65 (M5.5 - 11 x 65) <i>Hardwood:</i> 12 - 11 x 50 (M5.5 - 11 x 50) |
| Valley fixed | Self drilling screws with hex. washer-head & EPDM seal, 10 - 12 x 20 (M4.8 - 12 x 20) OR Self drilling screws with hex. washer-head & EPDM seal, 10 - 16 x 16 (M4.8 - 16 x 16) | Self drilling screws with hex. washer-head & EPDM seal, 12 - 14 x 30 (M5.5 - 14 x 30) | Type 17 Self drilling screws with hex. washer-head & EPDM seal <i>Softwood:</i> 10 - 12 x 30 (M4.8 - 12 x 30) <i>Hardwood:</i> 10 - 12 x 20 (M4.8 - 12 x 20) <i>Softwood:</i> 12 - 14 x 30 (M5.5 - 14 x 30) <i>Hardwood:</i> 12 - 14 x 20 (M5.5 - 14 x 20) |
| Side lap & accessories | Self drilling hex. head screws with washer & EPDM seal | 10 - 16 x 16 OR EPDM seal: 8 - 15 x 15 | |

FASTENERS

LYSAGHT® TRIMDEK® OPTIMA™ requires 5 fasteners per sheet per support as shown below. Fasteners should comply to AS3566, Class 3 or Class 4.

Roof - Screw fix through rib



Wall - Screw fix through pan



FASTENING SHEETS TO SUPPORTS

LYSAGHT® TRIMDEK® OPTIMA™ profile is pierce-fixed to timber or steel supports. This means that fastener screws pass through the sheeting.

You can place fasteners for LYSAGHT® TRIMDEK® OPTIMA™ through the crests or in the pans. To maximise watertightness, always place roof fasteners through the crests. For walling, you may use either crest- or valley-fixing.

Always drive the fasteners perpendicular to the sheeting, and in the centre of the corrugation or rib. Don't place fasteners less than 25mm from the ends of sheets.

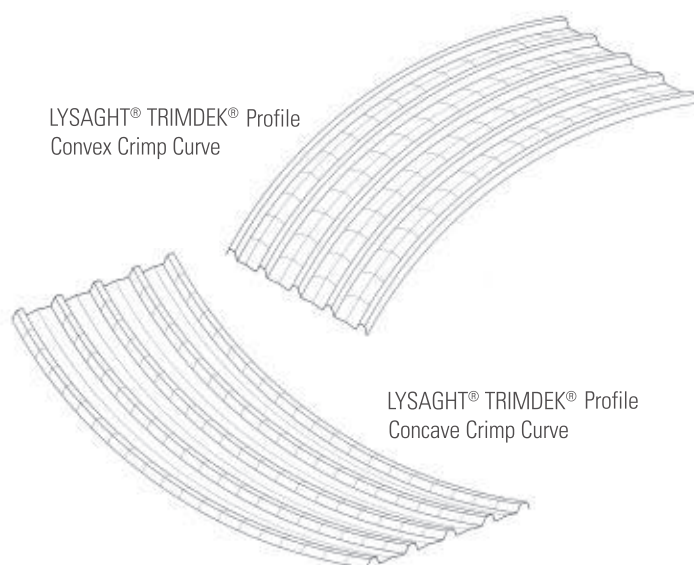
CURVING

Crimp Curved Roof

Crimp curved LYSAGHT® TRIMDEK® steel cladding is designed to provide versatility and creativity to bring new and refreshing designs to commercial, industrial, civic and domestic building. This design freedom has resulted in significant cost savings in construction, mainly due to:-

- Less supporting framework required for fascias, parapets and roofs.
- Simplified and reduced work involved in installation of fascia cladding.
- Reduction or elimination of many flashing and cappings.
- Less cladding material required to cover a given curve.

| Sheet Profile | Min Radius (mm) | Max Radius (mm) |
|----------------------------|-----------------|-----------------|
| Concave Crimp Curve | | |
| 0.42mm BMT/0.47mm TCT | 550 | 2000 |
| 0.48mm BMT/0.53mm TCT | 560 | 2000 |
| Convex Crimp Curve | | |
| 0.42mm BMT/0.47mm TCT | 450 | 2000 |
| 0.48mm BMT/0.53mm TCT | 470 | 2000 |



SUPPORT SPACINGS FOR CRIMP CURVED LYSAGHT® TRIMDEK® PROFILE (NON-CYCLONIC AREAS)

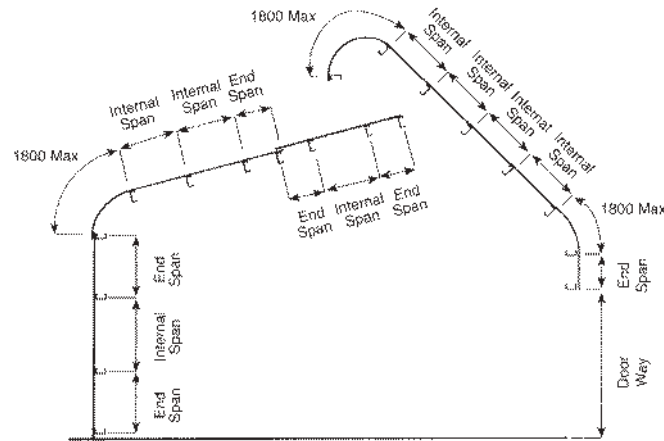
STRAIGHT PORTION OF CRIMP CURVED LYSAGHT® TRIMDEK® PROFILE:

- Maximum allowable spacings for the straight portion of crimp curved LYSAGHT® TRIMDEK® profile should follow the recommendations given at Maximum Support Spacings table.
- End spans refer to the spacing between the first and second supports from any free end of a sheet, except where that end of the sheet is crimp curve.
- The spacing between the supports either side of an end lap should be that as recommended for end spans.

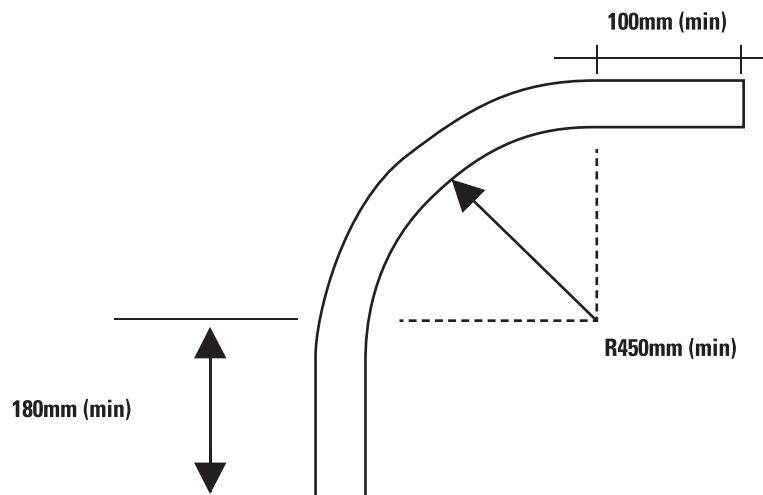
CRIMP CURVED PORTION OF CRIMP CURVED LYSAGHT® TRIMDEK® PROFILE:

This will depend on the radius of curvature but the following guidelines are recommended:-

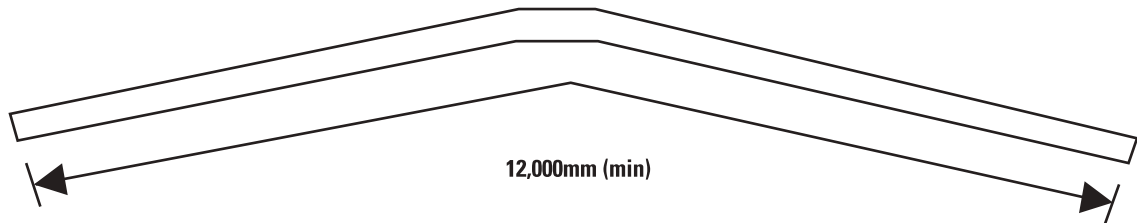
- For sheets curved to a radius of curvature not more than 3000mm, supports should be placed at centres not greater than 2100mm measuring around the arc of the curve.
- Where a curve of small included angle occurs (up to approximately 15°, for example at a ridge), support spacing should not exceed 1200mm.

**REQUIREMENTS FOR CRIMP CURVED LYSAGHT® TRIMDEK® PROFILE**

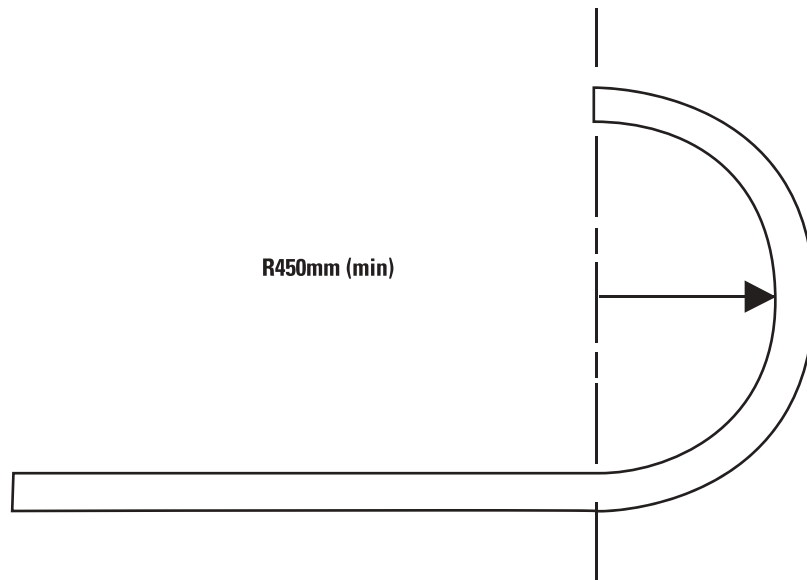
- Minimum curvature radius for convex is 450mm and 550mm for concave to underside or pan of sheet, minimum straight length of sheet at one end of curve is 180mm.



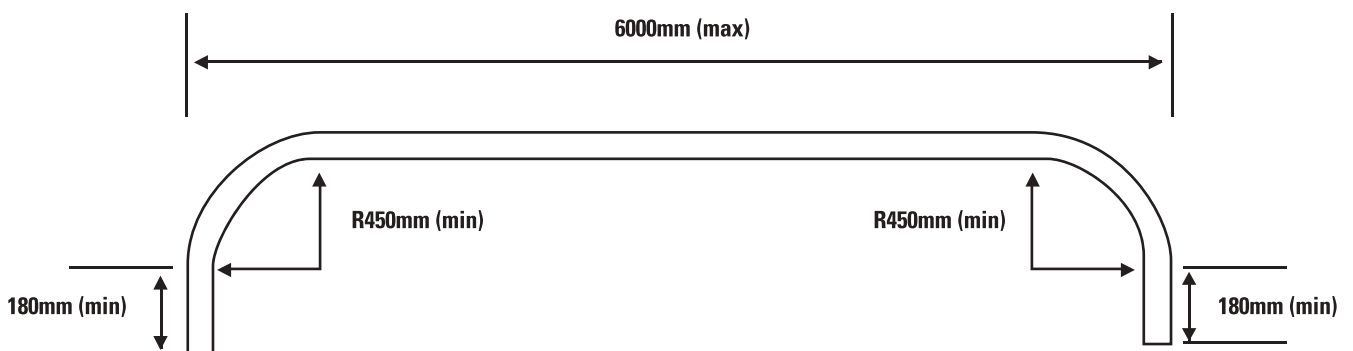
- Maximum length of sheet that can be crimp curved for ridge application is approximately 12000mm. The curve can either be convex or concave.



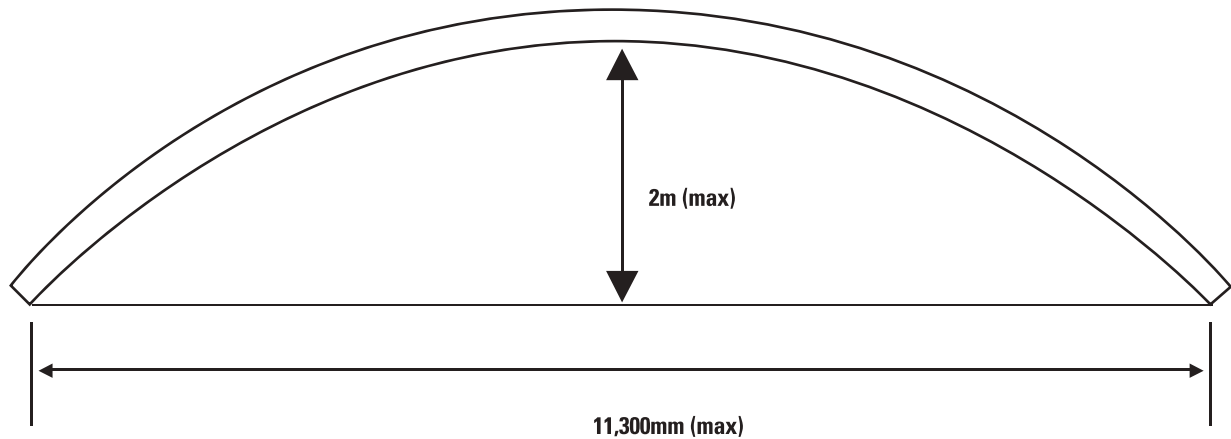
- The sheet can be crimp curved to three quarters of full circle but to facilitate side lapping, semi circle maximum is recommended.



- When both ends are crimp curved, the maximum recommended straight distance between the two curves should be 6000mm.



- For lengths exceeding 12000mm, please consult BlueScope Lysaght for more information.
- For easy transportation and maximum protection for the crimp curved sheets, the maximum height and length of the sheeting should be 2000mm and 11300mm respectively.



SIDE-LAPS

The side of LYSAGHT® TRIMDEK® OPTIMA™ with the anti-capillary groove is always the underlap (see figures on this page). It is generally considered good practice to use fasteners along side-laps however, when cladding is supported as indicated in Maximum Support Spacings, side-lap fasteners are not usually needed for strength.

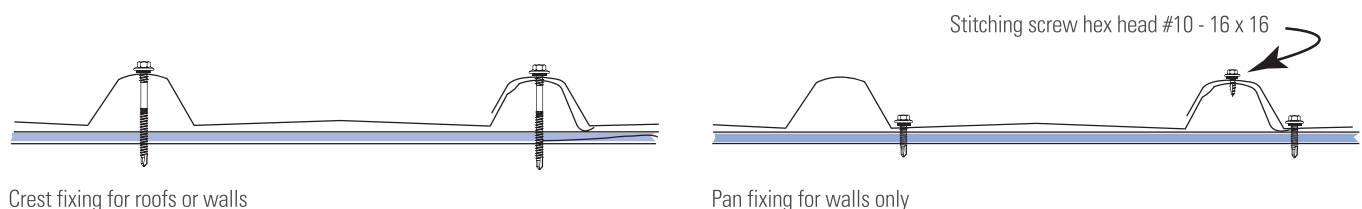
END LAPPING

End-laps are not usually necessary because LYSAGHT® TRIMDEK® OPTIMA™ is available in long lengths.

If you want end-laps, seek advice from our information line on the sequence of laying and the amount of overlap.

ENDS OF SHEETS

It is usual to allow roof sheets to overlap into gutters by about 50mm. If the roof pitch is less than 25° or extreme weather is expected, the pans of sheets should be turned-down at lower ends, and turned-up at upper ends by about 80°.



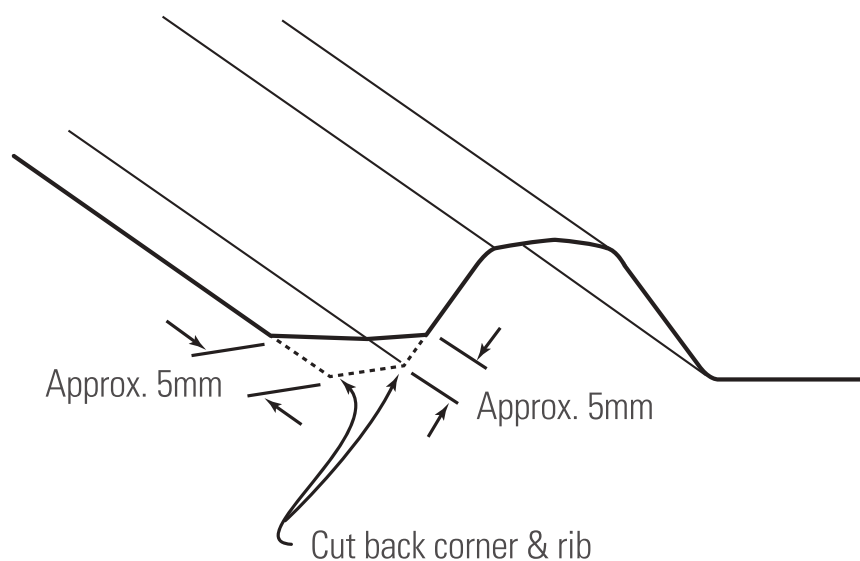
LAYING PROCEDURE

For maximum weather-tightness start laying sheets from the end of the building that will be in the lee of worst-anticipated or prevailing weather.

It is much easier and safer to turn sheets on the ground than up on the roof.

Before lifting sheets on to the roof, check that they are the correct way up and the overlapping side is towards the edge of the roof from which installation will start.

Place bundles of sheets over or near firm supports, not at mid span of roof members.



SHEET-ENDS ON LOW SLOPES

When LYSAGHT® TRIMDEK® OPTIMA™ is laid on slopes of 5 degrees or less, cut back the corner of the under-sheet, at the downhill end of the sheet, to block capillary action.

ADVERSE CONDITIONS

If this product is to be used in marine, severe industrial, or unusually corrosive environments, ask for advice from our information line.

METAL & TIMBER COMPATIBILITY

Lead, copper, free carbon, bare steel and green or some chemically-treated timber are not compatible with this product. Don't allow any contact of the product with those materials, nor discharge of rainwater from them onto the product. Supporting members should be coated to avoid problems with underside condensation. If there are doubts about the compatibility of other products being used, ask for advice from our information line.

MAINTENANCE

Optimum product life will be achieved if all external walls are washed regularly.

Areas not cleaned by natural rainfall (such as the tops of walls sheltered by eaves) should be washed down every six months.

A programme of roof maintenance is required to maintain any warranty offered.

SAFETY, STORAGE AND HANDLING

LYSAGHT® product may be sharp and heavy.

It is recommended that heavy-duty cut resistant gloves and appropriate manual handling techniques or a lifting plan be used when handling material.

Keep the product dry and clear off the ground. If stacked or bundled product becomes wet, separate it, wipe it with a clean cloth to dry thoroughly.

Handle materials carefully to avoid damage: don't drag materials over rough surfaces or each other; don't drag tools over material; protect from swarf.

CUTTING

For cutting thin metal on site, we recommend a circular saw with a metal-cutting blade because it produces fewer damaging hot metal particles and leaves less resultant burr than a carborundum disc.

Cut materials over the ground and not over other materials.

Sweep all metallic swarf and other debris from roof areas and gutters at the end of each day and at the completion of the installation. Failure to do so can lead to surface staining when the metal particles rust.

SEALED JOINTS

For sealed joints use screws or rivets and neutral-cure silicone sealant branded as suitable for use with galvanised or ZINCALUME® steel.



Trusted Partner for Building Systems

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