

# Structural Steel - Installation Hints

## Site Induction

Consideration should be given to handling and installation issues as part of site induction safety procedures. Specific consideration should be given to pack handling, avoidance of cuts, trips, slips and falls, long sheet handling particularly in windy conditions, sheet cutting procedures and surface temperature on sunny days. Personal protection equipment should always be used.

## Sheet Handling

Cut resistant or leather gloves should be worn when handling product. Foot protection should be worn when handling and transporting product.

## Supports

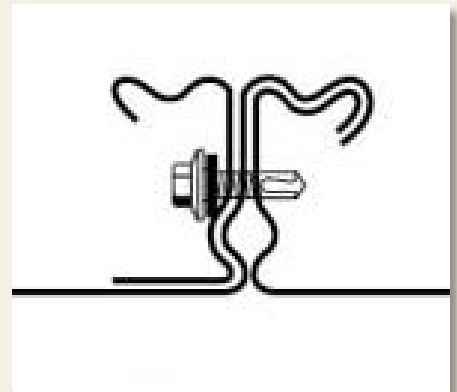
It is imperative that permanent and temporary supports be stable and adequate strength to withstand loadings prior to the placement of the decking. Ensure that the end bearing width (minimum 50mm) and internal bearing width (minimum 150mm) nominated by the engineer is achieved on site. In the case of masonry walls, a damp-course strip should be installed between the masonry and the decking.

## Walking on Conform

Take care when walking on Conform decking, particularly if the surface has become wet. Wear suitable rubber-soled footwear at all times. Also note that, when first delivered, there may be traces of rolling oil present. It is possible to step either in the pans or on the ribs of Conform decking but when walking use only the pans. Avoid walking on the edge sheet, or on rib ends.

## Cutting

Conform decking is supplied cut to length so that cutting is generally only required around projections and cutouts. Use a power saw fitted with an abrasive disc or metal cutting blade. It is recommended that cuts be started with the decking laid upside down. Then turn the sheet and, if necessary, complete the cutting of the ribs. This method should provide the neatest finish, and minimise the risk of burred edges being exposed on the finished slab.



**Metroll Newcastle**  
ABN 97 001 446 439  
268 Macquarie Road  
WARNERS BAY NSW 2282  
AUSTRALIA

P: +61 (0)2 4954 5799  
F: +61 (0)2 4954 0891  
[www.metrollnewcastle.com.au](http://www.metrollnewcastle.com.au)  
[enquiries@metrollnewcastle.com.au](mailto:enquiries@metrollnewcastle.com.au)

# Structural Steel - Installation Hints

## Decking Placement

Conform decking is easily placed by hinging the overlap edge of one sheet over the underlap edge of the previous sheet. If the decking is used as a platform for laying subsequent sheets, designated propping must be positioned first.

## Fixing

Once decking panels are laid they should immediately be secured against possible wind uplift. Typically use one fixing per pan at end supports, and one fixing every third pan at permanent internal supports. Self-drilling and tapping screws or power actuated drive pins are commonly used.

These fixings should be adjacent to the decking ribs. In exposed conditions additional fixing may be required. Shear studs, if used, attached immediately after decking placement, or puddle welds, will provide wind uplift resistance.

## Side-Lap Fastening

Side-lap fastening is only required if stacked construction materials are to be laid in the decking pans. Where required, side-lap fasteners should be at least No. 10/16 self-drilling and tapping screws. These should be fixed through the trough in the rib tops, and positioned at mid span on every rib.

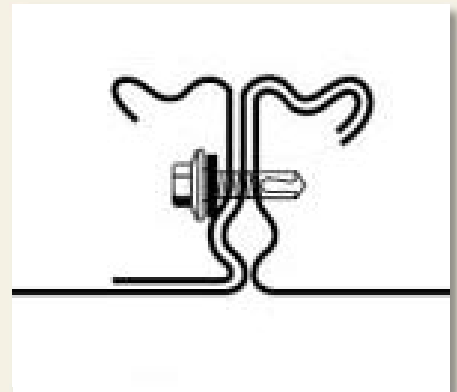
## Slab Edges

The edge of Conform composite slabs may be addressed in a number of different ways. For further details, please see the product technical manual. Edges of metal deck slabs exposed to direct or indirect rainfall must have a continuous drip feature to prevent water running to the underside of the decking. This is typically achieved by incorporating a formed notch in an all-concrete edge strip overhanging the supports.

## Large Slab Penetrations

Floor penetrations can be conveniently formed by conventional formwork methods and then cut out after the concrete has set. The reinforcing shown is required for penetrations of 200mm to 750mm.

For large predetermined openings greater than 750mm, such as for stairs and elevators, the most practical method is to supply supplemental structural framing to the support system for the Conform decking.



**Metroll Newcastle**  
ABN 97 001 446 439  
268 Macquarie Road  
WARNERS BAY NSW 2282  
AUSTRALIA

P: +61 (0)2 4954 5799  
F: +61 (0)2 4954 0891  
[www.metrollnewcastle.com.au](http://www.metrollnewcastle.com.au)  
[enquiries@metrollnewcastle.com.au](mailto:enquiries@metrollnewcastle.com.au)

# Structural Steel - Installation Hints

## Small Slab Penetrations

Holes can be cut through a Conform slab, but this must be done with caution. The following constraints apply:

- Always obtain approval from the design engineer.
- Do not cut holes through the decking prior to concrete placement and cure.
- When positioning holes keep clear of the internal supports.
- Holes must not exceed 200mm diameter, and must be central within the pan of the decking.
- Holes must be either drilled or sawn using appropriate cutting tools.
- No other holes/penetrations within 1000mm. Deck with holes of no greater than 200mm meeting the criteria above can be considered to be continuous.

## End Span Accessory

Where required by design, Conform end span accessory is generally used adjacent to every rib in each nominated end span. In fact, the accessory is required to be the full length of the end span plus the longer of, an additional 300mm or 10% of the end span length. The additional length protrudes into the adjacent internal span.

## Partial Continuity

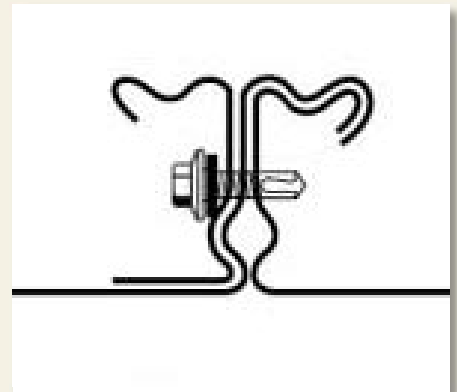
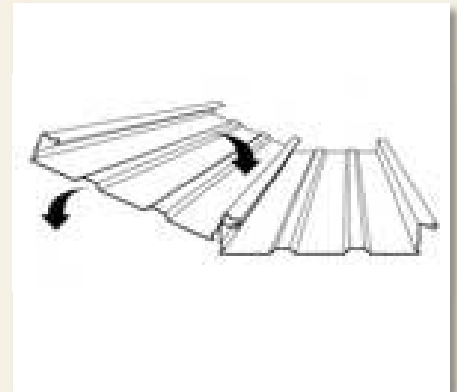
Conform accessory can be used to create partial continuity of decking across an internal support. Where decking ends butt at an internal support beam, either a 1200mm long piece of Conform or a 600mm long piece with a turn over can be fixed using four screws to each rib to create this continuity.

## Shear Studs

Welded shear studs may be nominated for use with composite beams. These should be placed into prescribed positions using suitable stud welding guns. Use settings and procedure appropriate for the deck galvanised coating and the beam coating/s. Standard placements for 19mm diameter studs, along with placement rules.

## Stacked Material

Great care must be taken during construction to avoid damage from stacked materials. The formwork mode data given in this manual is based on a maximum-stacked material load of 1.5k Pa loaded in the pans.



Metroll Newcastle  
ABN 97 001 446 439  
268 Macquarie Road  
WARNERS BAY NSW 2282  
AUSTRALIA

P: +61 (0)2 4954 5799  
F: +61 (0)2 4954 0891  
[www.metrollnewcastle.com.au](http://www.metrollnewcastle.com.au)  
[enquiries@metrollnewcastle.com.au](mailto:enquiries@metrollnewcastle.com.au)

# Structural Steel - Installation Hints

## Sealing

Conform decking provides resistance to leakage during concrete pouring. For most applications where the concrete slump is not excessive no sealing is required. To prevent slurry leakage just tape over the small ceiling hanger recess near the bottom of the ribs, and the two-pan stiffening rib recesses at each sheet end.

## Mesh Placement

Place shrinkage and temperature reinforcement (fabric) such that minimum cover requirement as per AS3600 is satisfied (generally 20mm to 30mm cover from top to slab or on top of the deck ribs for thin slabs).

- The fabric shall be properly lapped and tied to ensure continuity in both directions.
- If the slab has been designed as continuous, then additional steel reinforcement as specified by the engineer shall be provided over supports.

## Concrete Pouring

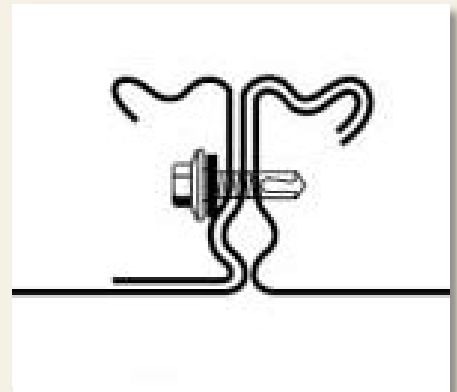
Finally, the concrete must be poured evenly to the panel ends on the prepared clean deck, in the direction of span of the decking. Heaping of wet concrete must be avoided. The concrete should be placed in accordance with the requirements of AS3600 and have a minimum 28 day compressive strength.

## Concrete Curling

Conform composite slabs require the same degree of curling as a conventional reinforced concrete slab. Follow the guidelines within AS3610.

## Prop Removal

Temporary propping must not be removed until the slab has cured sufficiently. Prop removal procedure should be in accordance with AS3610.



**Metroll Newcastle**  
ABN 97 001 446 439  
268 Macquarie Road  
WARNERS BAY NSW 2282  
AUSTRALIA

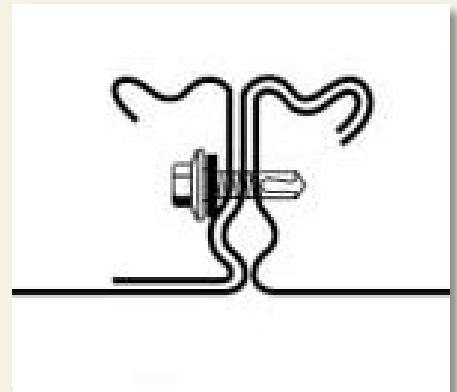
P: +61 (0)2 4954 5799  
F: +61 (0)2 4954 0891  
[www.metrollnewcastle.com.au](http://www.metrollnewcastle.com.au)  
[enquiries@metrollnewcastle.com.au](mailto:enquiries@metrollnewcastle.com.au)

# Structural Steel - Installation Hints

## Suspension Hangers

Conform decking has provision for suspended ceiling installation or support of building services. A two-part hanger bracket is simply inserted into the underside of any rib and held in place by the suspension rod. The ceiling hanger is capable of supporting a load of 2.5kN, and can be inserted at any time before or after the concrete pour.

Ceiling hanger performance is dependant on concrete being in place. Performance of the ceiling hanger, loaded before the concrete is poured is significantly less. Provided additional side lap fasteners are installed through the vertical web of the ribs – at no more than 500mm centres either side of the hanger, capacity of the hanger is reduced to 0.6kN.



Metroll Newcastle  
ABN 97 001 446 439  
268 Macquarie Road  
WARNERS BAY NSW 2282  
AUSTRALIA

P: +61 (0)2 4954 5799  
F: +61 (0)2 4954 0891  
[www.metrollnewcastle.com.au](http://www.metrollnewcastle.com.au)  
[enquiries@metrollnewcastle.com.au](mailto:enquiries@metrollnewcastle.com.au)