



# LIFESPAN BEAM INSTALLATION GUIDE

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## Installation points

### Standards

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### Safety

- Always wear appropriate personal protection equipment (PPE). Comply with the local occupational health and safety legislation.
- Refer to the applicable Material Safety Data Sheet (MSDS).
- Cutting LifeSpan produces fine particulate matter.
  - Work in well-ventilated areas.
  - Wear dust masks during cutting, drilling and cleaning.
  - Clean up saw-dust by vacuuming or wetting the area down and sweeping.
  - Always wear safety goggles while cutting and installation.
  - Saw dust may be slippery.
  - Cut beams may have sharp edges (particularly mitred cuts).
  - Wear gloves when working with beams.

### Storage and handling

- Individual beams are lighter than WPC and can be more easily handled. Beams are, however, bundled for convenience and can, as a result, be heavy. Take care when lifting, placing or removing from raised pallets.
- More than one person may be required for lifting. This is dependent on the length of the beams and the number of beams within a bundle.
- Ensure the mass handled does not exceed safe limits as defined by applicable local legislation.
- When handling lengths of beams higher than 4 m, ensure both ends are lifted simultaneously and evenly. Lift the beams 1 m from each end to provide better control.
- Handle the beams carefully. Dropping the beams (and all high impact loads in general) can result in damage to the profiles.
- During transportation use corner protectors where strapping is required.
- All components should be stored completely undercover.
- When storing beams, a pallet or flat surface should be used to support the full length of each component.
- All components should be securely stored.
- No component should sit in water or similar.
- Avoid over-stacking and eccentric stacking.
- Don't stack the beams vertically.

### Plan

- Assess the site environment and ensure the product is suitable for the intended application.
- Classify the corrosion category, loading class, and any other property that will influence the selection of product.
- Determine appropriate spans for the selected profile. This will depend on the application and the loading class for the region. Suggested spans are provided for typical residential scenarios (refer to Installation guide).
- An appropriately qualified professional must be consulted whenever necessary to ensure the product, this document and the intended application complies with all applicable legislation for that region.
- Develop a maintenance plan to ensure the longevity of the system. This should consider drainage, corrosion and vegetation.

## Site preparation

- Ensure adequate drainage. Prevent pooling water and/or erosion.
- Consider light conditions before installing beams and features near windows and entry ways.

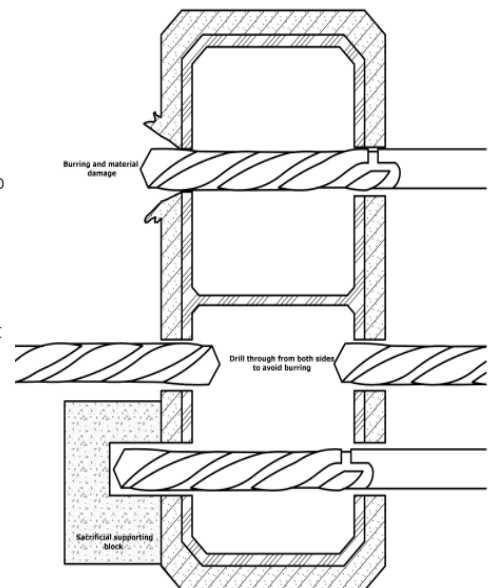
## Cutting

- Use a sharp, fine-toothed, carbide-tipped blade designed for Aluminum to cut LifeSpan material.
  - Use a non-ferrous-aluminum-cutting chip saw blades with a maximum of two teeth per centimeter.
  - Do not use grinders or chainsaws for cutting.
  - Using an inappropriate blade may result in peeling or deformations in the beam.
- LifeSpan™ beams are provided as factory cut. Ends should be trimmed to carpentry cut.
- Beams can be mitred.
- Don't router LifeSpan beams.
- Don't use oil to lubricate or cool blades as this may stain the product.
- Don't allow the blade to exceed 60 °C when cutting the beams.
- Support both ends of the beams when cutting.

## Fastening

### General

- Consult local building codes for span requirements and fastener sizes.
  - Check strength requirements before fastening joints as additional reinforcement may be required.
- Do not use nails.
- Avoid using threaded fasteners, tapping or pre-drilling screws when fastening into thin aluminum structures without fastener reinforcing points within the profile.
- Glues may stain the cap of the beam. This can be sanded off but may create an inconsistent finish.
- When fastening, attempt to fasten through the internal walls of the profile and not just the external walls.
- Do not over-tighten fasteners as this may cause profiles to crack or cause other deformations.
- Generic truss and purlin brackets can be used to support beams.
- When considering fasteners and brackets, attention should be paid to dissimilar materials that may cause accelerated corrosion in the right environments.
- Beams can be joined and supported by metal inserts within the cavity of the beams. These must be painted and treated for environmental conditions.



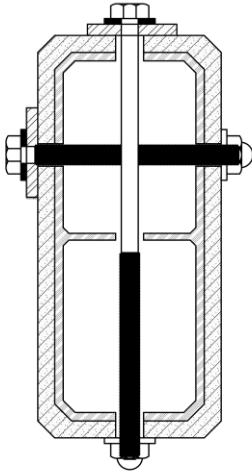
## Drilling

- Owing to the ductility (softness) of the aluminum material, additional care should be taken when drilling.
  - Use a sharp cut drill bit, designed to drill through aluminum with a tip angle of 130° - 140° to avoid chipping or burring.
  - Use a carbide or hardened drill bit to maintain the sharp edge.
- Allow the drill bit to do the work; do not apply force to the drill as this may cause deformation in the beam.
- To avoid material burring out from the back of the beam, drill through a single face and then turn the beam to drill through the next.
  - A sacrificial beams can be used to provide support while drilling through the back of a face.

## Fastener types

### 1. Bolts

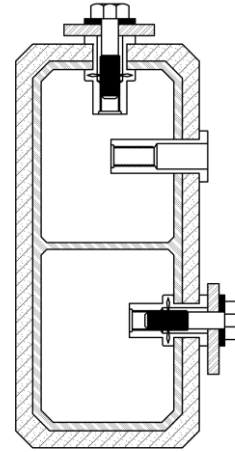
- Bolts should be specified in accordance with structural requirements.
- Dome nuts and bolts can be used for a better aesthetic.
- Always use rubber or plastic washers.



**Bolts (structural fastening)**

### 2. Rivets and threaded blind rivets

- Use only for non-structural applications or when a beam is properly supported by a structural element, such as a truss clip.
- Blind rivets allow for threaded fasteners to be used while providing structural stability to the fastener.



**Blind rivets (non structural fastening)**

## Glues

Use to fasten non-structural elements to beams. Glues specifically designed for securing plastic to aluminum connection can be used, such as:

- Multipurpose; high bonding strength adhesives, such as Sikaflex Crystal Clear.
- Structural adhesives, such as Scotch Weld DP-8010.

## Maintenance

- Remove all post-installation burrs and marks by sanding.
- Use soap and water to remove dirt.
- Profiles can be gently sanded to remove stains.
- Sand along the grain of the beams for best results.
- Deep scratches can be mended by melting composite saw dust into the scratch and then smoothing it down.

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