

		Double Fixing Brackets		created	JM
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INTRODUCTION

Double fixing brackets can be used to increase the total amount of fixings required to securely attach the SunLock framing system to a roof structure.

This can particularly useful in the following situations:

- Where the panels are required to be mounted in landscape (where the large spacing between purlins makes it impossible to provide enough fixings)
- Where the panels are mounted on fixed tilt brackets (where the large spacing between purlins makes it impossible to provide enough fixings)
- Where the installer / designer doesn't wish to include a separate sub-frame.
- Where the installer / designer doesn't wish to include a third rail per panel row.

This guide covers:

- Calculating whether double fixing brackets are required.
- Installing the double fixing brackets to the roof.

For further information on mounting panels in landscape, refer to the [TechBulletin Landscape 1.0](#)

GUIDE TO USE

Calculating whether double fixing brackets are required



In this example, the house is assumed to be:

- In wind region C
- Have a tin roof with a pitch of 25 degrees
- Have timber purlins spaced at 1200mm
- Some panels are installed in the intermediate zone (in landscape format)

From the SunLock installation manual v4.2, it states that the fixings must be a maximum of 580mm apart.

As the purlins are spaced 1200mm apart, there are not enough fixings to run two rails with a single fixing across each purlin. To work out whether double fixing brackets are required:

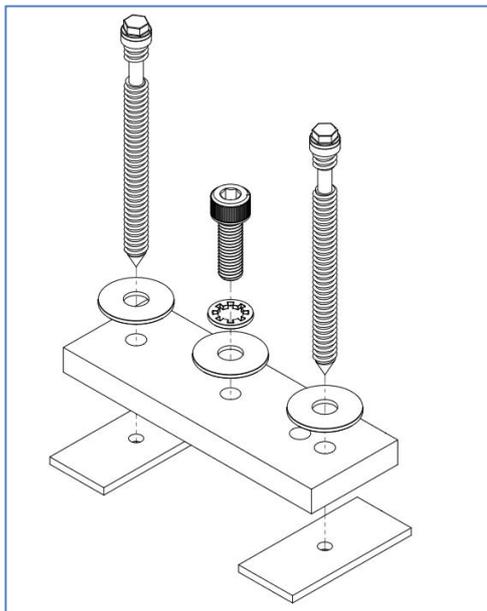
- Calculate panel row length (1000mm x 3 panels = 3000mm)
- Divide it by the maximum spacing length (3000mm / 580mm = 5.17)
- Round up the answer to get total amount of bays between fixings per rail (= 6)

As there are only 5 purlins available and a minimum of 6 fixings are required per rail, there are not enough fixings to run two rails with a single fixing across each purlin.

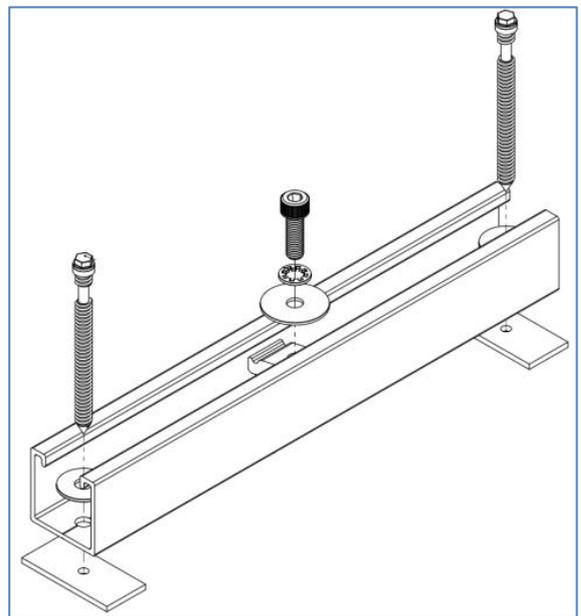
If a double fixing bracket was used the total amount of fixings would be 5 purlins x 2 (double fixing bracket) totaling 10 fixings locations per rail.

As 10 fixings are greater than the required 6, a double fixing will be sufficient.

Installing double fixing brackets to the roof



SLDFB01 (For Spandek / Custom Orb)

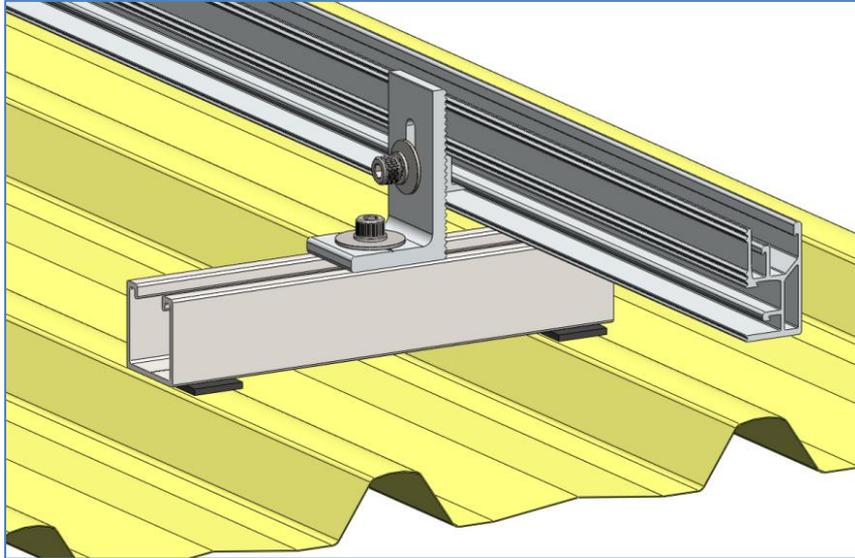


SLDFB02 (For Trimdek / Spanrib)

To install the double fixing brackets:

- Determine where the SunLock railing / channel need to be positioned.
- Remove roofing screws on adjacent sides of the railing / channel.
- Span the two ridges of the roof sheeting with the double fixing bracket ensuring that EPDM washers separate the two parts.
- Using the holes in the sheeting as a guide, align the bracket and fasten to the roof (re-drill or enlarge the holes if required).
- If the holes need to be enlarged, ensure that a flat washer is placed between the screw head and the bracket to prevent pullout.

- L-feet or channel can be mounted directly on top of the bracket (ensure that the bracket is centered as much as possible to prevent uneven loads being placed through roofing screws).



SLDFB02 Installed on Trimdek roof (with L-foot / SunLock rail)

TECHNICAL & SUPPLY CHAIN INFORMATION

Sales code	SLDFB01 (suits Spandek / Custom Orb roof sheeting) SLDFB02 (suits Trimdek / Spanrib roof sheeting)
Material	6000 series aluminium
Australian Standard Certification	AS / NZS 1170.2:2011 - Wind actions

FURTHER INFORMATION

For further information contact Apollo Energy on 1300 855 484 or sunlock@apolloenergy.com.au.