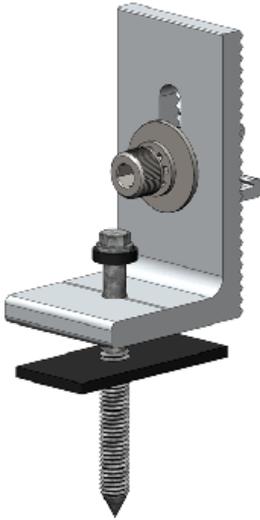


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Tech. Bulletin	Rev. Nr.			valid from	08.10.2014
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INTRODUCTION

SunLock uses L-feet (or L-brackets) to attach solar PV frames to building frames that are clad with sheet metal roofing.



INSTALLATION

Always install the L-foot on the roof crest, not in the pan. This eliminates the majority of the risk of water ingress.

Each L-foot is attached to the building frame using the supplied 14g roof screw with Class 14 coating. The supplied EPDM washer is located between the L-foot and the sheet metal roof. Timber purlins/battens should be pre-drilled, especially old hardwood that is prone to splitting.

The roof screw should be tightened in accordance with the installation manual for the roof sheet. The roof screw should not be over tightened – the roof sheet should not be deformed or crushed.

FIXING CAPACITY

The fixing capacity of the L-foot is limited by either the roof screw or the building frame (e.g. the batten or purlin) it is screwed into. The L-foot itself is not the limiting factor. Typically, the fixing capacity is in the range of 1-2 kN.

The SLLF005 model is supplied with a 10mm hole that suits an M6 or M8 bolt and flat washer. Bolts have a much higher fixing capacity than roof screws. In these cases the fixing capacity should be defined as the lowest of the bolt, the building frame or the L-foot (6 kN).

WATER INGRESS

The primary purpose of the EPDM washer is to prevent water ingress. The leak path is the annular gap between the roof sheet and the roof screw. This is sealed by the thick EPDM washer located between the L-foot and the roof sheet. As the roof screw is tightened the base of the L-foot presses down on the EPDM, causing the EPDM to bulge inwards and press tightly around the roof screw, thus creating the waterproof seal.

The rubber washer on the head of the roofing screw is superfluous. It is located between the head of the roof screw and the L-foot. If this washer splits, fails or falls away, the worst scenario is that a small amount of water (less than 0.1 millilitre) can get under the head of the screw and sit above the EPDM washer. However, the EPDM washer still prevents the water from penetrating the roof sheet.

ELECTROCHEMICAL CORROSION (DISSIMILAR METALS)

According to the BlueScope technical bulletin CTB-12 (Rev 3, November 2003) on dissimilar metals, aluminium accessories are compatible with all common roofing materials, including galvanized iron, Zinalume and Colorbond. Therefore, the aluminium L-foot is permitted to directly contact the roof sheet. The EPDM washer provides a bonus additional extra separation and corrosion protection.

TECHNICAL INFORMATION

Sales code	SLLF002 (with 75mm timber screw) SLLF004 (with Tek screw) SLLF005 (with 10mm hole, no fastener, no EPDM)
Material	Aluminium 6106-T6, with a stainless steel fastener to rail nut, zinc-coated roof screw.
Australian Standard Certification	Certificate of structural adequacy to AS/NZS 1170.2 from Partridge Structural

FURTHER INFORMATION

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