



The Right Way™ to attach almost anything to metal roofs!

## Installation Instructions

This document details the proper installation procedure for product reliability. Installers must thoroughly read this document and have a comprehensive understanding of the installation procedures before the installation. Users and installers are responsible for ensuring all permitting documents comply with local and national building and fire codes, and ensuring a safe installation of all electrical aspects of, and applicable loads on, PV arrays. Please scan the QR code on the right for additional general safety information regarding product use.



You can also view load test results at [www.s-5.com](http://www.s-5.com) where applicable, or contact your S-5! distributor for more information. These instructions are for use by those experienced in the trade. Always follow appropriate safety precautions and use appropriate tools.

## What's Included in Your Box

- (100) pre-assembled Protea Brackets\*
- (401) stainless steel capped self-piercing screws\*

\*Broken-box quantities may vary

**Protea Bracket is designed to fit most trapezoidal sheet shapes. Caution is advised for rail-mounted PV installations in snow country.**

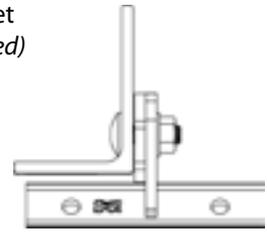
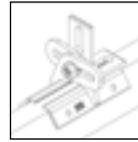
## What You'll Need for Installation

- String line
- Rag
- Screw Gun
- 5/16" (7,7 mm) Drive Socket
- 1/2" (13 mm) Open-end (Spanner) or Socket Wrench

**When installing the PVKIT as illustrated in Fig. B, an extra M8 nut is needed. (Purchase separately.)**

## Components

Protea Bracket  
(Pre-assembled)



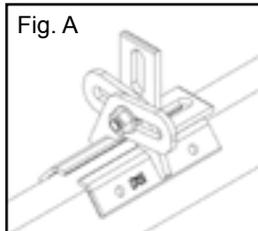
Stainless Steel  
Capped  
Self-Piercing  
Screws



## Are You Mounting With PVKIT® or Using Rails?

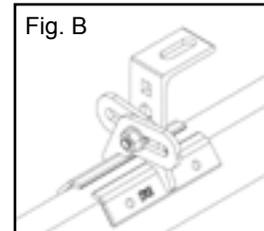
### For Use With Side-Mounted Rails:

Protea Bracket comes pre-assembled in the correct orientation for use with side-mounted rails. If the assembly has been deconstructed, orient the L-foot as shown in Fig. A.



### For the PVKIT or Bottom-Mounted Rails:

Remove the M8 nut and orient the Protea Bracket's L-foot as shown in Fig. B to mount the PVKIT or bottom-mounted rails.



## Use Proper Hardware

Protea Bracket is mounted directly onto the crown of the trapezoidal sheet using the stainless steel cap screws (provided) or Bulb-Tite rivets (not provided).



Provided



Not Provided

### Screw Specifications:

1/4" (6.3 mm) Diameter - 1" (25 mm) Length  
- 5/16" (8 mm) Hex head with EPDM rubber sealing washer

### Rivet Specifications:

9/32" (7.7 mm) Diameter - Alu/Alu Flat Head  
Bulb-Tite Rivet with 5/8" (16 mm) EPDM Washer Grip: 0.032" / 0.8 mm - 9.5 mm

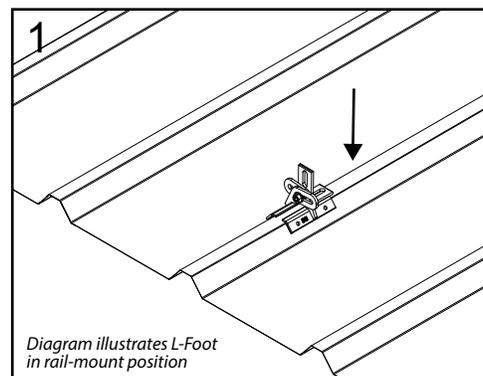


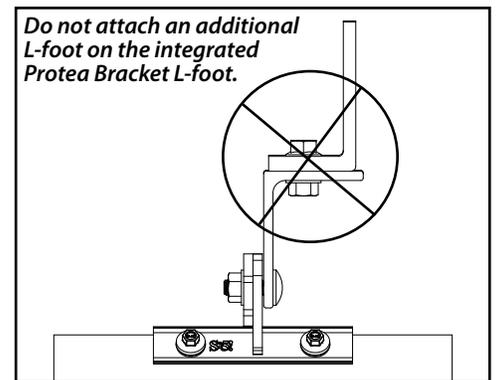
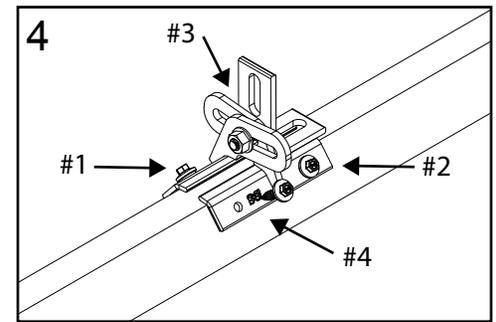
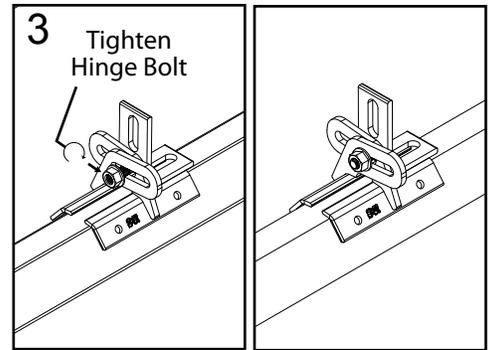
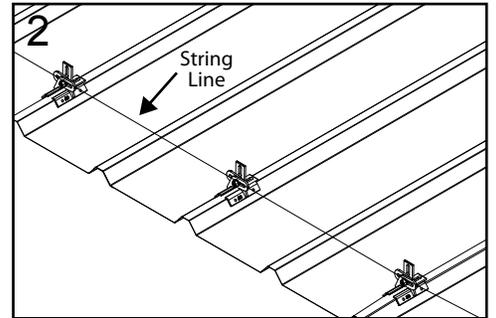
Diagram illustrates L-Foot in rail-mount position

**⚠ LAPPED RIB INSTALLATION ADVISORY ⚠**

Due to variations in lapped ribs and sealant placement, installing these brackets on a lapped rib of trapezoidal panel profiles is not generally recommended. If your application requires fixing to a lapped rib, please contact our support team at [support@s-5.com](mailto:support@s-5.com).

# How to Install Protea Bracket

1. Determine the location of assembly. Wipe away excess oil and dirt from panel surface.
2. To ensure brackets are correctly aligned, install a single Protea Bracket on each end of the roof at a measured, consistent distance from the bottom edge of the roof. Use a string line between the two brackets. Mount the remaining Protea Brackets along the string line. For upslope bracket-spacing techniques, reference the S-5! website at [www.S-5.com](http://www.S-5.com).
3. Before removing the protective paper over the EPDM pad, place Protea Bracket onto the panel rib and hand-tighten the hinge bolt to customize the bracket's proper fit. Because Protea Bracket is reversible, be sure all brackets on the same row have the L-foot in the same orientation and face the same way. Align carefully, peel the protective paper off the EPDM pad and adhere the bracket to the roof.
4. To secure Protea Bracket into the rib of the roof profile, alternate the provided screws through the pre-punched holes as shown in Fig. 4. Use all four pre-punched hole locations to achieve tested holding strength. Be careful not to over tighten the screws: a slight compression extrusion of rubber around the washer is a good visual check. If a fastener has been stripped, it is important to remove the fastener and replace it with a waterproof bulb rivet. To avoid stripping, use a screw gun with depth-sensing nose piece or an adjustable torque clutch. **Do not use additional sealant.** Lastly, hold the end or slotted L-flange straight and firmly in place while using the open socket wrench to tighten the hinge bolt to the specified torque. Protea Bracket is now ready to install other ancillaries, such as rail or PVKIT. **Do not attach an additional L-foot on the integrated ProteaBracket L-foot.**



Specified Torque	Inch Pounds	Foot Pounds	Nm
Hinge Bolt	225	18.75	25.4
M8 Nut for PVKIT	225	18.75	25.4

NOTE: Any S-5! warranty and/or calculation may be void if hardware is used that was not furnished by S-5! directly or through one of their authorized distributors or any assembly that has not been tested by S-5!.

**S-5!® Warning! Please use this product responsibly!**

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