

The background of the cover is a close-up photograph of a grey metal IBR (Interlocking Roof Bracket) with a serrated edge. Overlaid on the left side are several large, stylized green leaves. The title 'IBR Bracket Installation Manual' is printed in a large, white, sans-serif font across the upper right portion of the image.

IBR Bracket Installation Manual

Deo Solar

GENERATE, CONSERVE, CONTRIBUTE



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www.deosolar.co.za



Faster Installation

Rail-less
Pre-assembled



Reduced Cost

Less Parts
Injection moulded



Advanced Material

Glass-reinforced composite
UV-stabilized
Corrosion resistant



Innovative Design

Self-sealing
Auto-alignment with roof profile
Fits all panel dimensions



Greener

Made from 100%
recyclable material

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INSTALLATION

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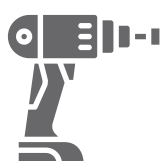
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INTRODUCTION

1.1 TOOLS REQUIRED



→ Battery powered drill



→ 6 mm



→ 5/16 Posibit Drive with extension



→ 10-20 Nm



→ > 6 m

INTRODUCTION

1.2

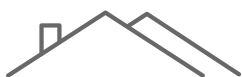
GENERAL RULES OF SAFETY

- Only qualified and appropriately trained installers are authorized to install and operate the equipment.
- Before installing, verify that the product adheres to on-site static loading requirements. In the case of roof-mounted systems, it is imperative to consistently assess the roof's load-bearing capacity.
- Adherence to health and safety regulations, accident prevention guidelines, and relevant standards is mandatory.
 - Wear protective gear, including a safety helmet, boots, and gloves.
 - Roofing activities should align with roofing regulations, employing fall protection measures when eaves height exceeds 3 m.
 - Ensure the presence of a minimum of two individuals throughout the installation process to promptly respond to emergencies
- All installation and assembly instructions provided by the panel manufacturer must be adhered to
- Performing equipotential bonding, grounding, or earthing among individual parts should align with country-specific standards, as well as adhere to national laws and regulations.
- A copy of the installation instructions should always be available during installation.
- Failure to follow Deo Solar's general safety and assembly instructions and utilize all system components releases the company from liability for any resulting defects or damages. Deo Solar does not assume responsibility for any damage incurred through the use of parts from competitors, and warranty coverage is excluded in such instances.
- Adhering to all safety instructions and ensuring the correct installation of the system qualifies for a 10-year product warranty entitlement. We highly recommend reviewing our guarantee terms, accessible at deosolar.co.za. Upon request, we can also provide this information.
- The system is dismantled in the reverse order of its assembly.

INTRODUCTION

1.3

GENERAL GUIDELINES



Roof Requirements

- Trapezoidal sheet metal thickness
 - Aluminium $\geq 0,5$ mm (with a tensile strength of 165 N/mm²)
 - Steel $\geq 0,4$ mm (S235 acc. DIN EN 10025-1)
- Roof pitch inclination: 5 - 45°
- Integrity of roof sheets and substrate to be verified by as required by National and Local regulations before placement of panels or brackets

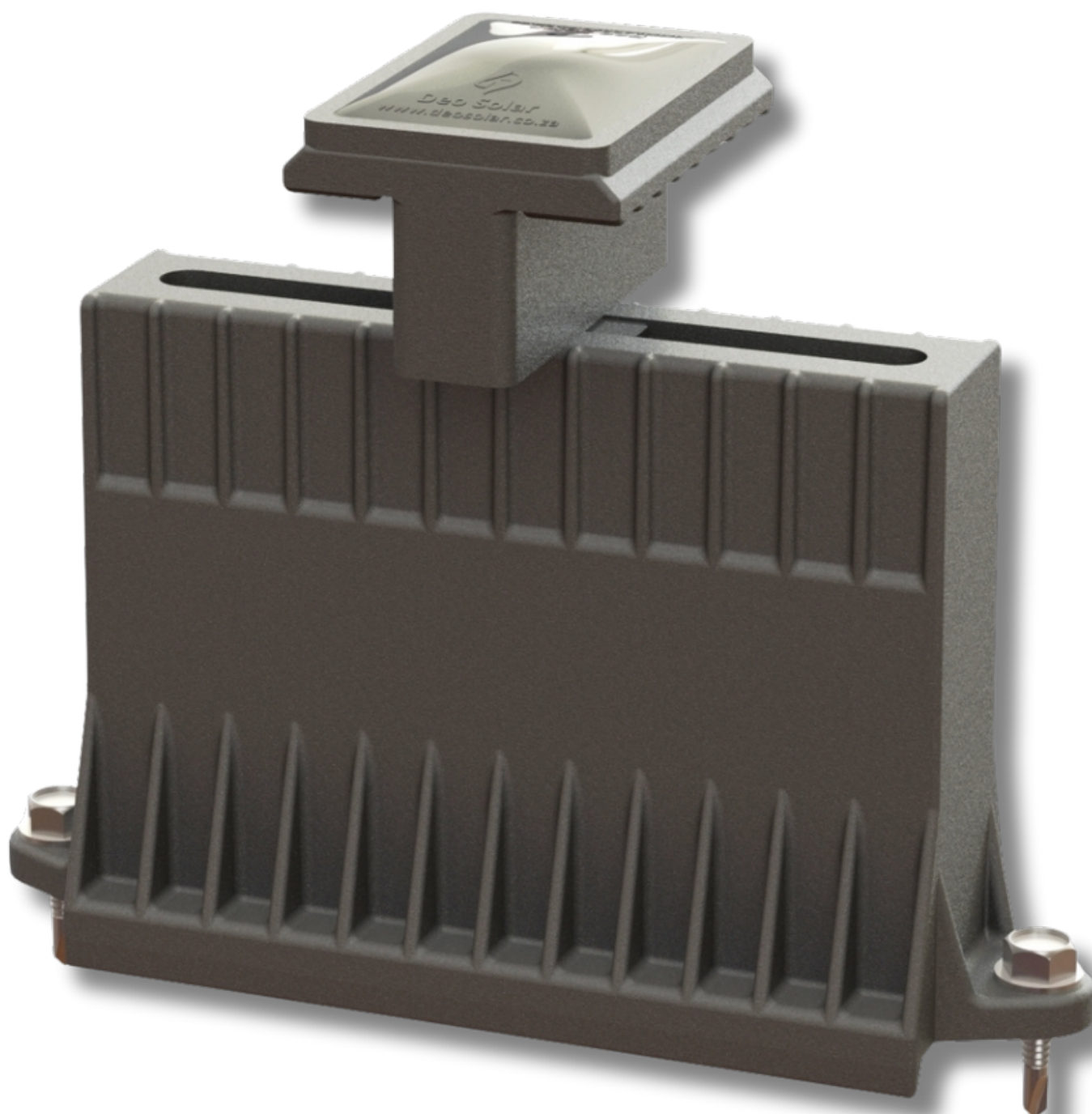


Mounting Instructions

- Earthing in accordance with panel manufacturer instructions as well as National and Local regulations should be adhered to at all times.
- Always perform visual inspection of roof sheeting to ensure that the integrity is not compromised where a bracket are to be secured.
- Deo Solar brackets are not compatible with frameless modules. Ensure that module specifications are compatible with Deo Solar brackets before securing brackets on roof sheeting.
- Ensure that bracket placement is correctly calculated in accordance with solar module dimensions before mounting to roof sheeting.
- Ensure that clamps at the ends of panels are flush to the panel frame before tightening.

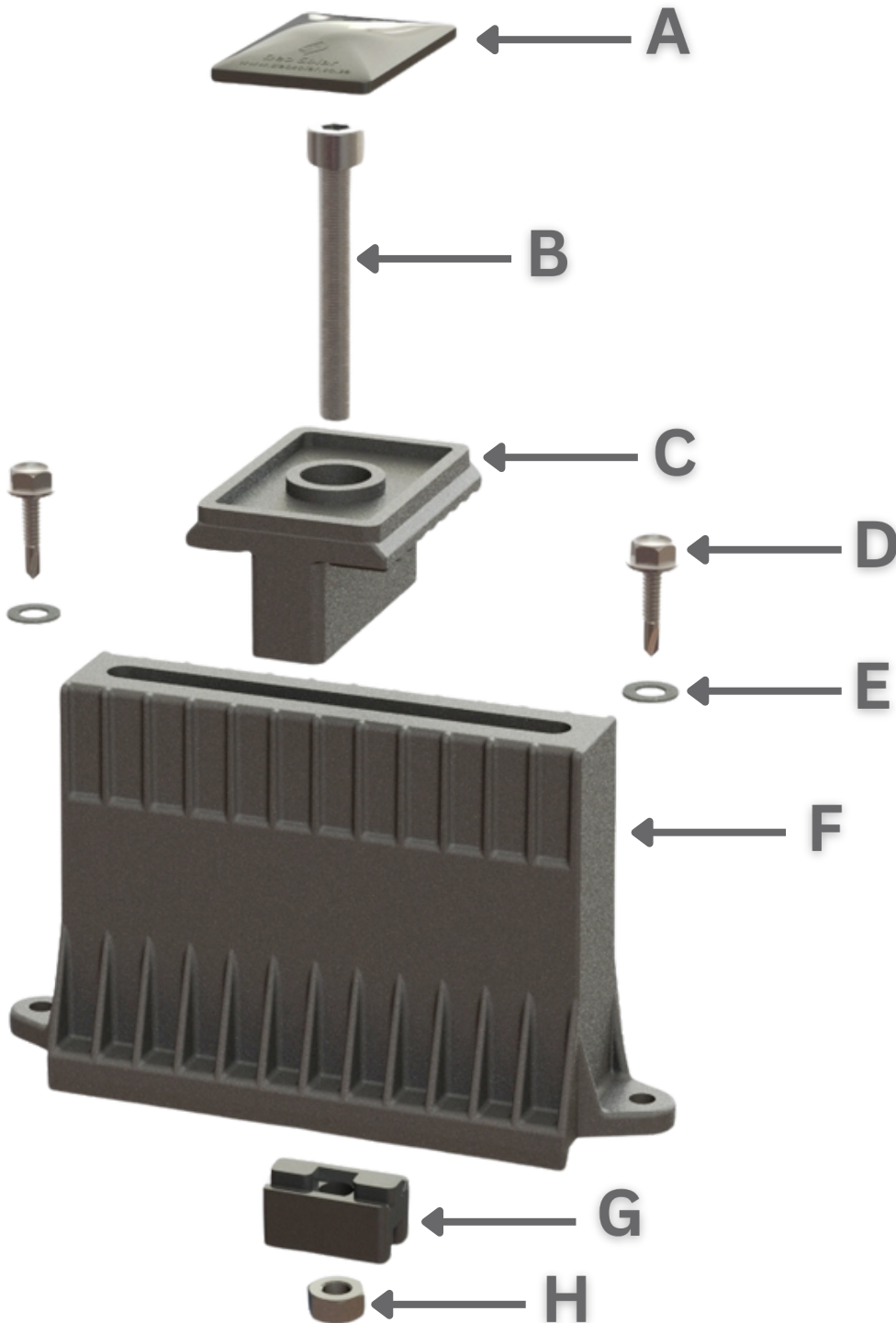
INSTALLATION

2.1 COMPONENTS



INSTALLATION

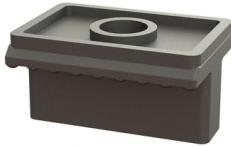
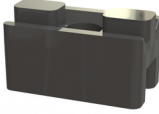
2.1 COMPONENTS (CONTINUED)



INSTALLATION

2.1

COMPONENTS (CONTINUED)

#	Component	Description	Material
A		Tamper Proof Cap	HDPE
B		M8 x 65	304 Stainless Steel
C		Top Bracket	Industrial Composite
D		M5 x 25 Taper Shaft Stitching Screw	Class 4 Zinc plated
E		Sealing Washer	Rubber
F		Base Bracket (IBR)	Industrial Composite
G		DS T-Nut holder	Industrial Composite
H		M8 Nut	GR8.8 zinc plated

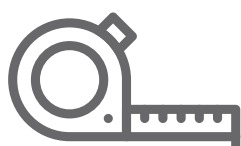
INSTALLATION

2.2 INSTALLATION PREPARATION



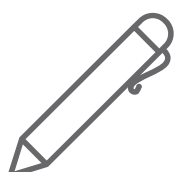
Solar array design

- Complete solar array layout design
- Determine location of brackets based on panel specific requirements
- Tabulate bracket coordinates for site installation



Verify layout

- Verify available roof space against solar array design
- Determine placement location of first bracket (reference location)
- Mark reference location on roof



Mark installation locations

- Using the reference location, mark the installation location of each bracket as per the tabulated coordinates.
- Verify that layout is correct as per design before proceeding with installation of the solar brackets.
- Deo Solar will not be held liable for incorrect placement of brackets on roof plates

INSTALLATION

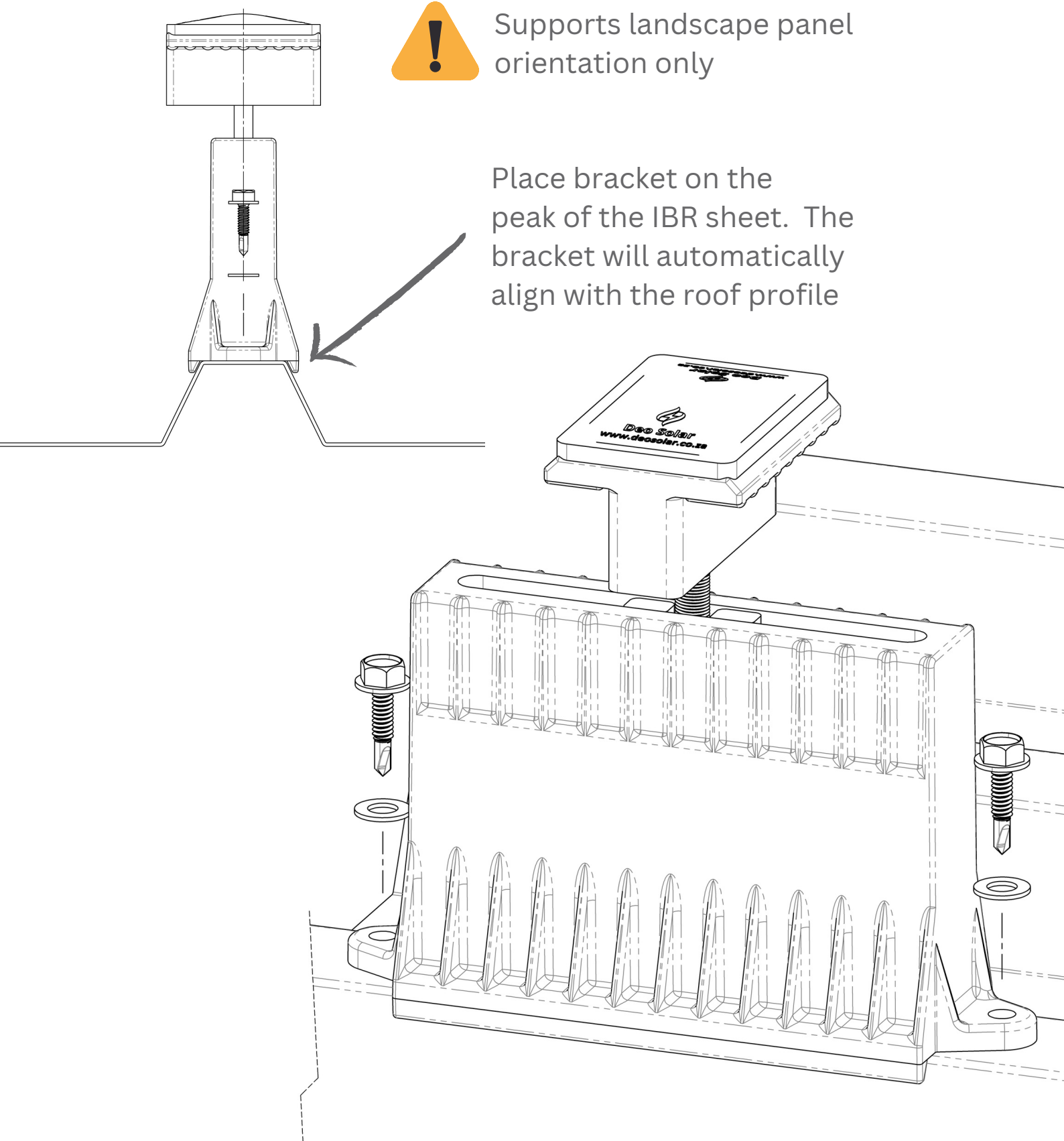
2.3

BRACKET PLACEMENT



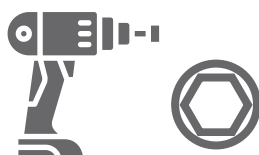
Supports landscape panel orientation only

Place bracket on the peak of the IBR sheet. The bracket will automatically align with the roof profile



INSTALLATION

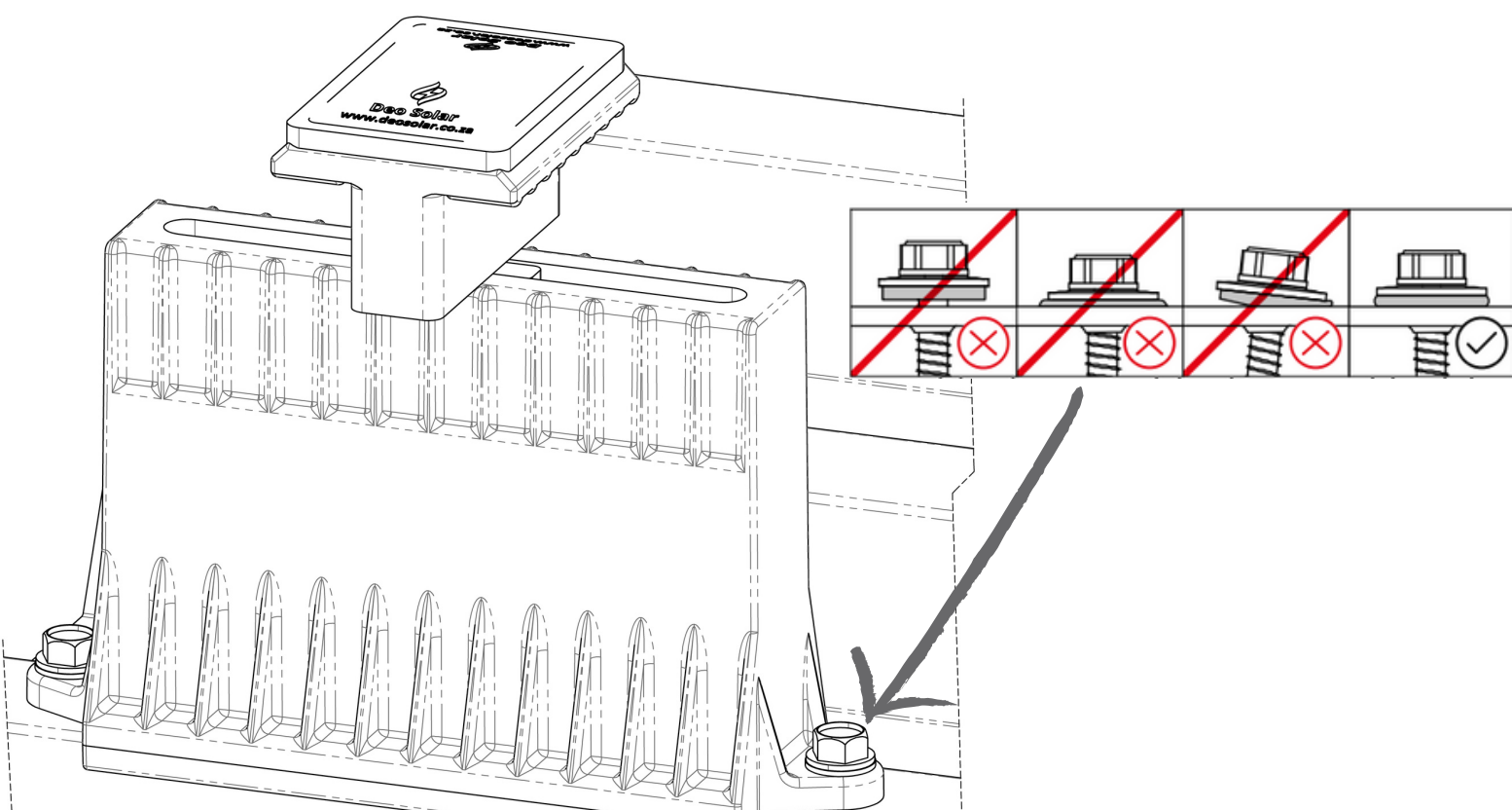
2.4 SECURE BRACKET TO SHEETING



Secure bracket in place with a stitching screw complete with sealing washer on each side of the bracket.

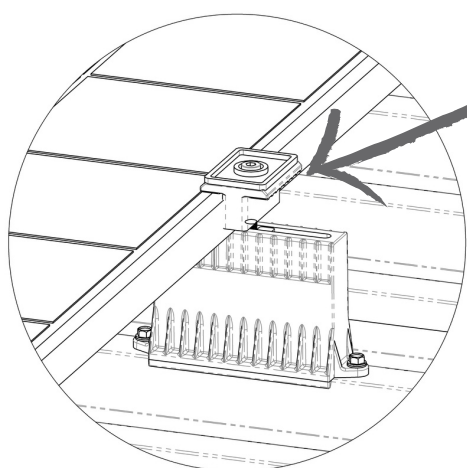


Do not Strip. Avoid over torque during installation.

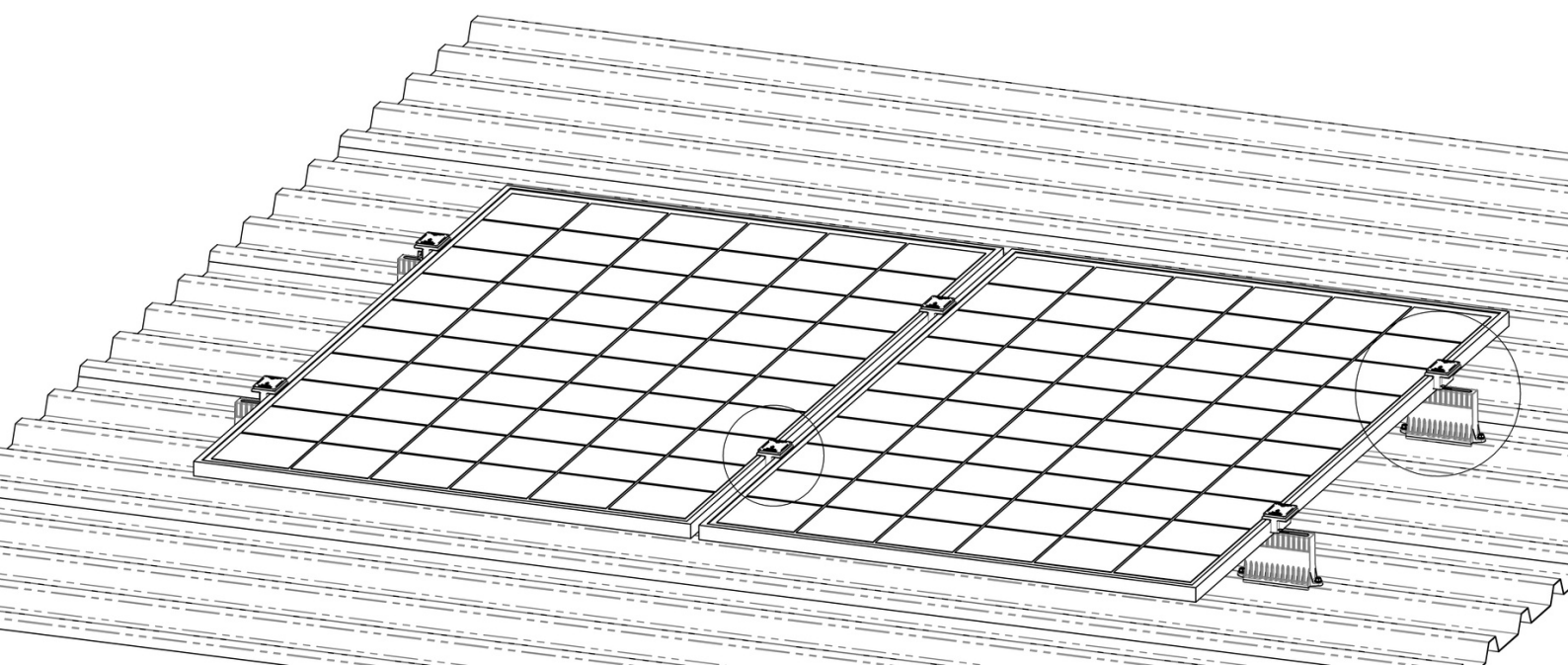
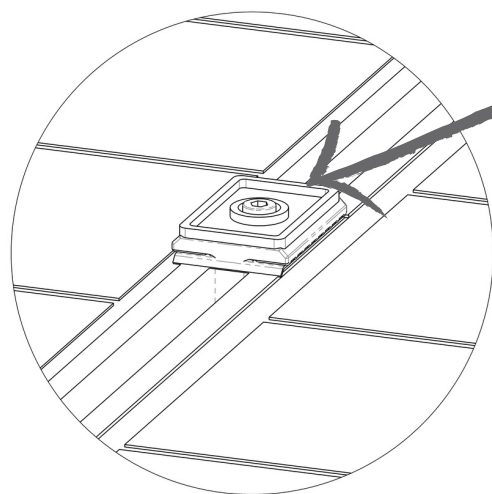


INSTALLATION

2.5 SECURE PANEL IN PLACE



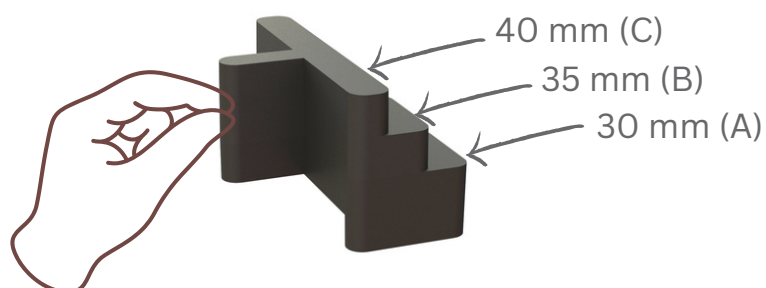
1. Place Panel.
2. Slide top bracket onto solar panel frame.
3. Secure panel in place once correctly placed on supporting ends of the bottom bracket.
4. Do not over torque components.



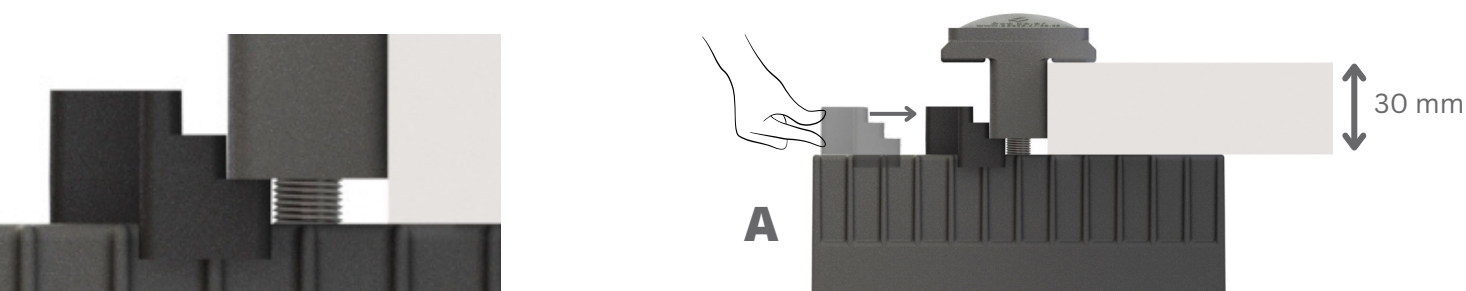
INSTALLATION

2.6 END SPACER INSTALLATION

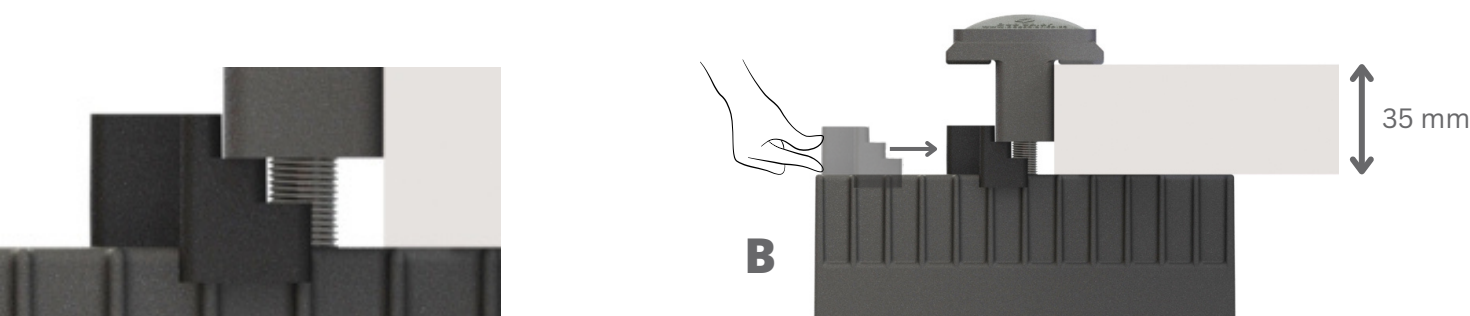
Place end spacer on the top of the bracket in accordance with relevant panel thickness (30mm or 35mm or 40mm). Once in position, secure in accordance with torque setting in section 2.6.



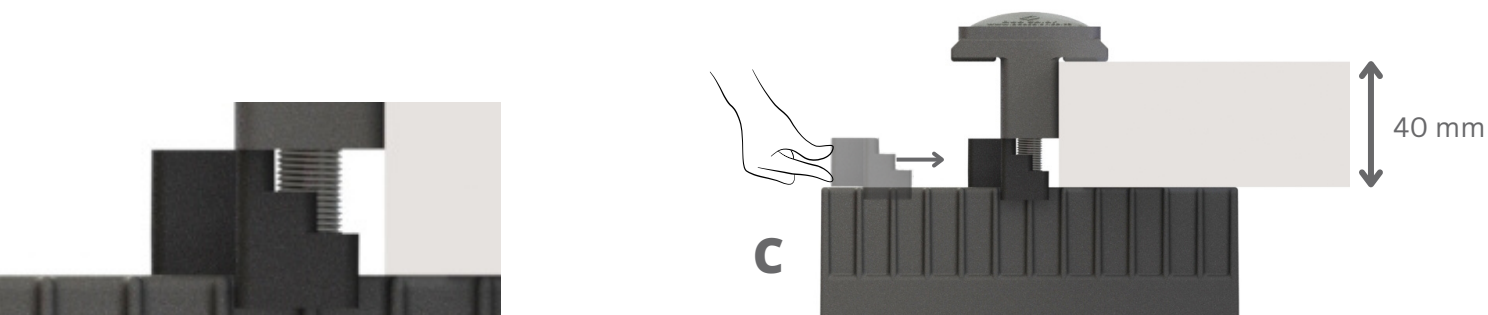
30 mm Panel Thickness



35 mm Panel Thickness



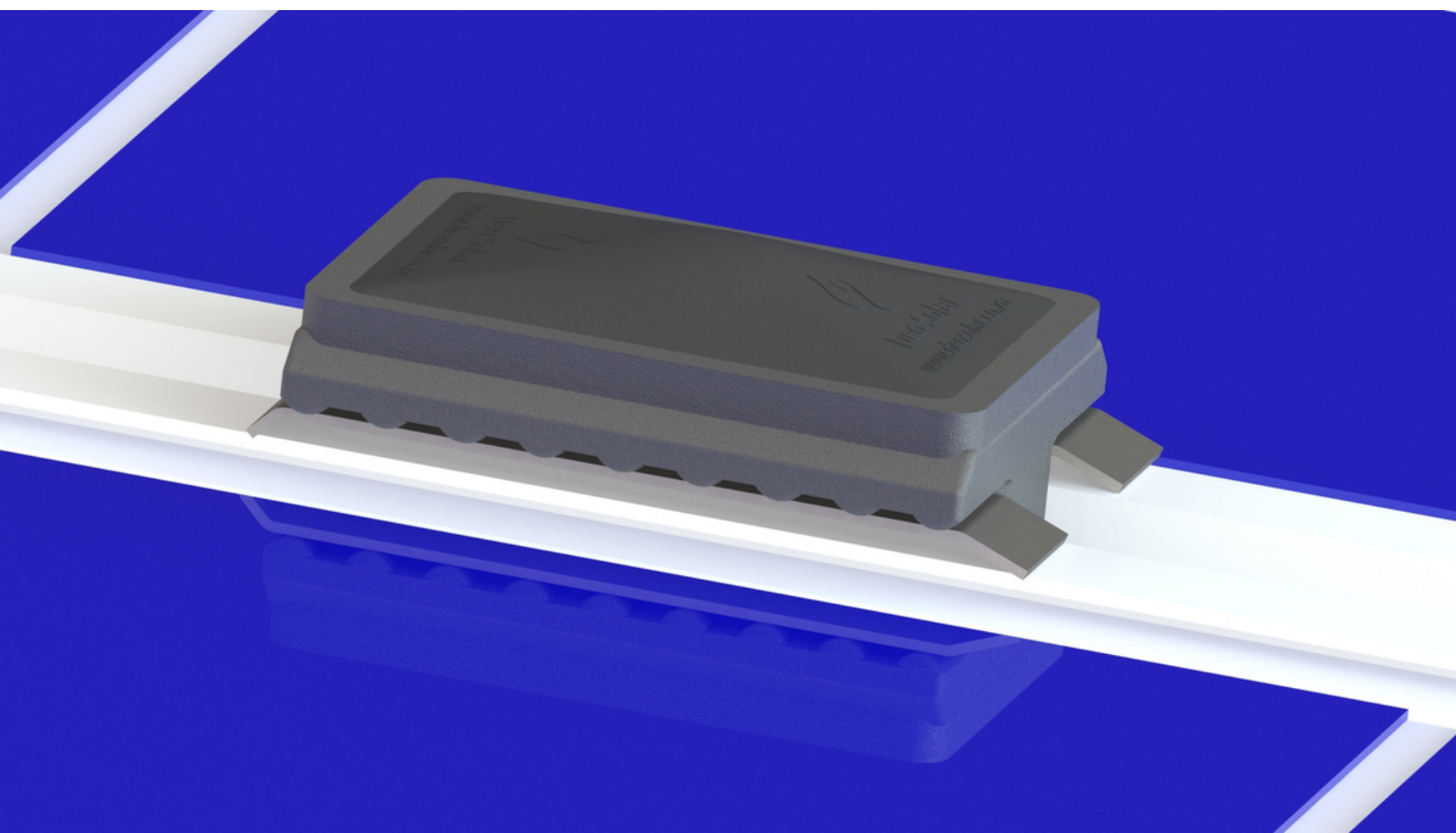
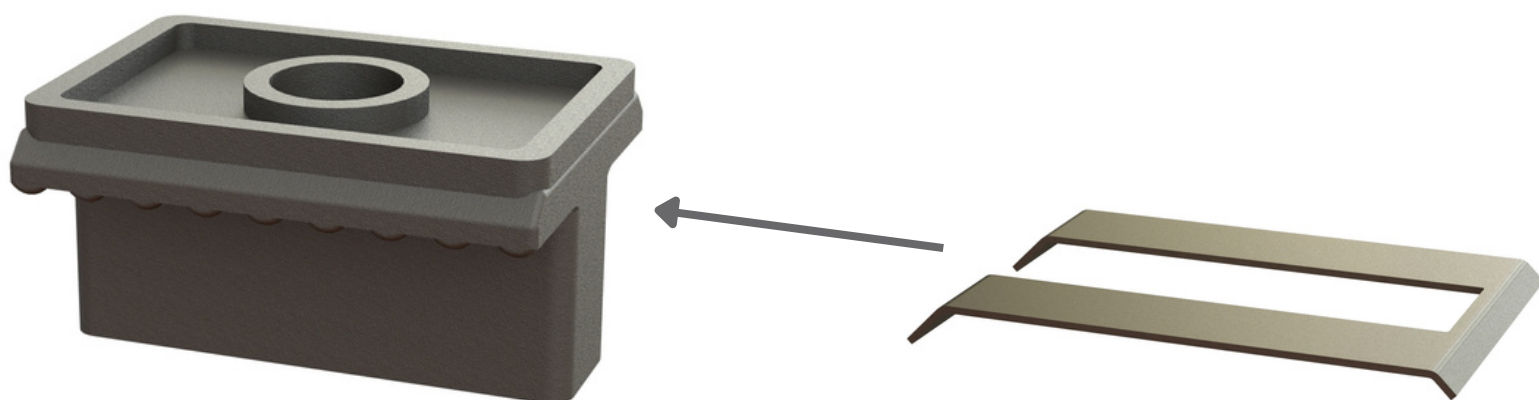
40 mm Panel Thickness



INSTALLATION

2.7 INSTALL EARTH PLATE

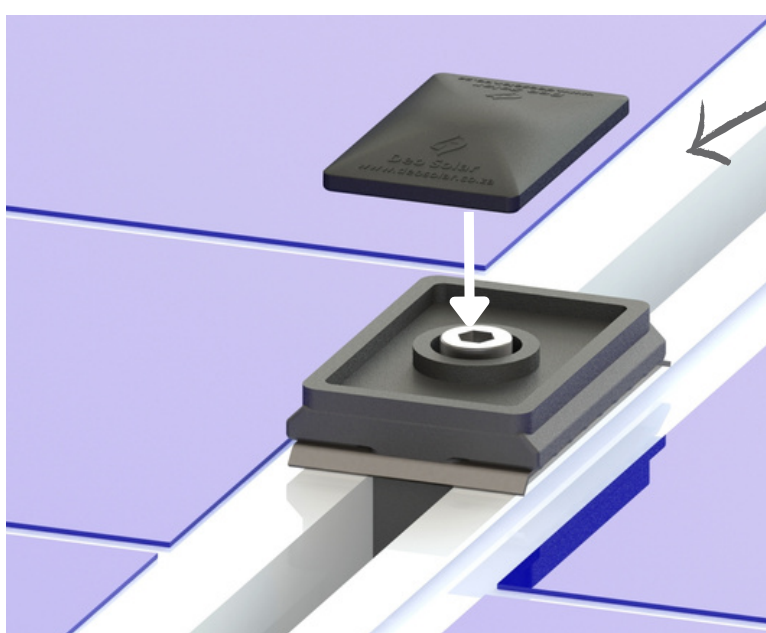
Assemble earth clip on the top bracket as shown before installation of solar panels in order to bond panel frames.



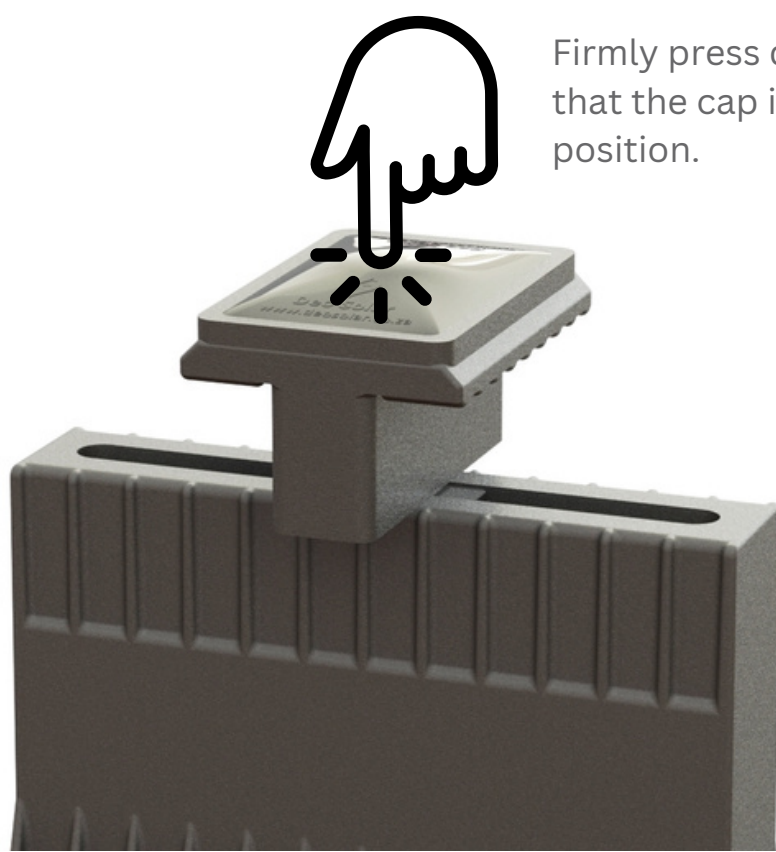
INSTALLATION

2.8 ANTI-TAMPER CAP INSTALLATION

Once top brackets are firmly secured proceed with installation of anti-tamper cap



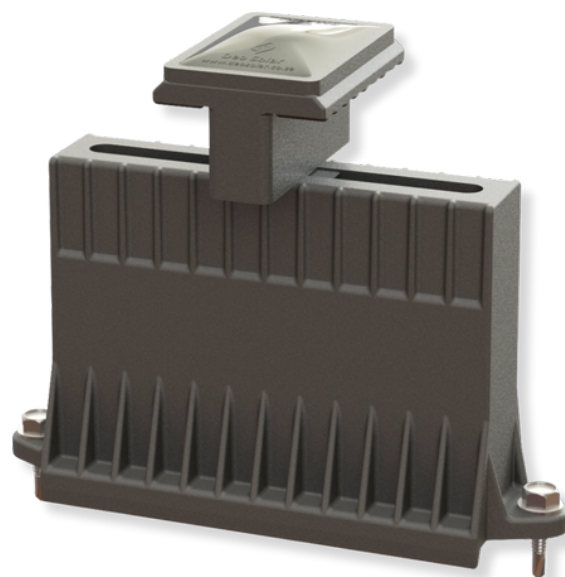
Place anti-tamper cap in position on the top cap as shown. Ensure correct alignment on all sides upon placement.



Firmly press down on cap to ensure that the cap is properly seated in position.

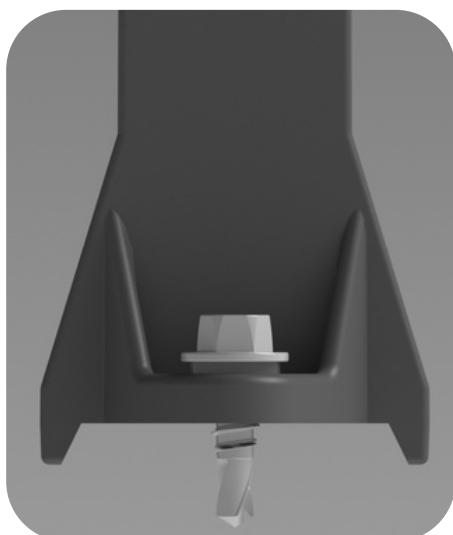
TECHNICAL DATA

3.1 DATASHEET

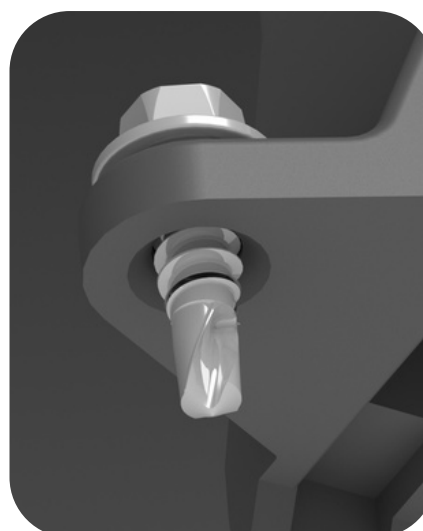


Technical Data

Material	PA-6 UV with glass fibre reinforcement	Yield Strength	145 Mpa
		Modulus of Elasticity	9,5 Gpa
		Temperature of deflection under load	210 deg Celcius
Components	Top Bracket		
	Bottom Bracket		
	Anti-tamper cap		
	t-nut		
	M8 x 60/65 Bolt		
	Taper Shaft Stitching Screws		
Uplift	Roof Structure	IBR profile sheet, minimum thickness of 0,5mm. Roof cobering should be fixed to the substrate adequately to comply with building regulations	
	Maximum Design Wind Uplift	3,2 kPa	
	Safety Factor In Design	1,2	



Auto-alignment



Self sealing design

TECHNICAL DATA

3.2 GENERAL ARRANGEMENT

