

T-BLADE CENTRE FIX POST ANCHOR (PSCFB)

FEATURES AND BENEFITS

CONCEALED: The central blade allows for a hidden appearance after installation.

EASY: Simply locate anchor on flat and level base and fasten with required bolts for a reliable and robust post anchor.

STRONG: Manufactured from 8mm steel. Structural continuous fillet weld on both faces of centre flange to base.

SPECIFICATIONS

STEEL	G300
THICKNESS	8mm
CORROSION RESISTANCE	Hot Dipped Galvanised (500g/m ²) Or Black Powder Coated over Zinc coating Or Stainless Steel Grade 316
POST SIZE	90mm, 115mm, 140mm
POST STIRRUP TO TIMBER POST FASTENER	90mm T-Blade M12 4.6 grade Bolts. 115mm and 140mm T-Blade M16 4.6 grade Bolts.
ANCHOR BASE TO FOUNDATION FASTENER	90mm T-Blade M12 anchor bolts/threaded rod 115mm and 140mm T-Blade M16 anchor bolts/threaded rod



AS1684, AS1720 & AS4055 COMPLIANT

- Designed in accordance with Pryda testing and relevant Australian standards
- Engineering computations in accordance with the relevant Australian standards

PSCFB90
PSCFB90B
PSCFB90SS



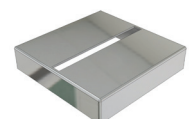
PSCFB90CB
PSCFB90CSS



PSCFB115
PSCFB115B
PSCFB115SS



PSCFB115CB
PSCFB115CSS



PSCFB140
PSCFB140B
PSCFB140SS



PSCFB140CB
PSCFB140CSS



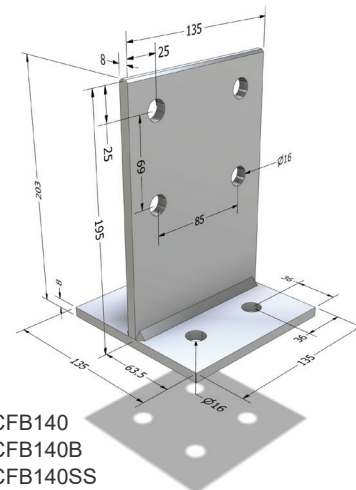
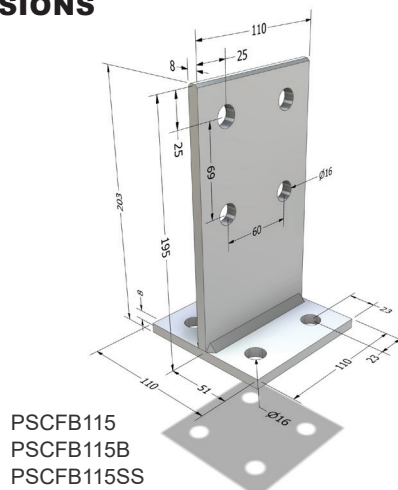
Black powder coated series are available in all sizes

NOTES:

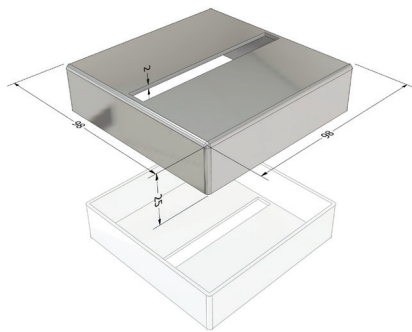
1. Selected bolts and associated assembly components material to be compatible with T-Blade finish, i.e. Galvanised bolts with HDG anchor, stainless steel bolts with SS anchors.
2. All bolts to be minimum structural Grade 4.6.
3. Match same size T-blade anchor.
4. Powder Coating over zinc plating for 2mm thick steel capping is suitable for external applications. Expected service life of the powder coating for typical inland residential areas is approximately 8 years and then maintenance may be required depending on exposure conditions/environment. For coastal or similar areas, the expected lifespan can be much less. It is important to consult the project owner/designer to ensure the selected material finish is deemed fit for purpose and meets the owner capacity to maintain product. Before installation of powder coated capping for external applications, inspect the capping closely and ensure the powder coating is not damaged exposing the zinc layer or steel. If damage is found immediate repair using an approved external coating should be applied rectifying the damage before use. Seek advice from paint/coating specialist for approved external coating suitable for the application. Any damage to the powder coating after installation should also be repaired immediately.

Routine inspection and maintenance are recommended to upkeep and prolong service life of the product. Wash regularly every 6 months (dependent on installed environment) with mild pH-neutral soap. Rinse well and ensure no water pooling around anchor. Repair any scratches or chips that may compromise the coating with an approved exterior grade touch up paint to prevent rust from creeping under the coating.

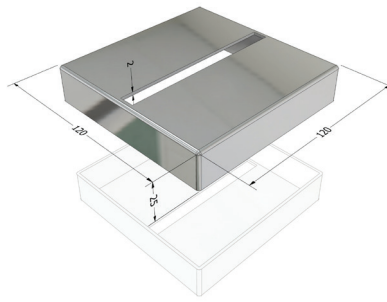
Technical drawing of the PSCFB90 mounting plate. The drawing shows a 3D perspective view of the plate with dimensions in millimeters. The plate is 90mm high and 88mm wide. It features two mounting holes, each with a diameter of 12mm (2 x Ø12). The distance between the centers of the mounting holes is 60mm. The distance from the top edge to the center of the upper mounting hole is 38mm. The distance from the bottom edge to the center of the lower mounting hole is 25mm. The plate is shown mounted on a base plate, which is 88mm wide and 40mm high. The base plate has four mounting holes, each with a diameter of 12mm (4 x Ø12). The distance between the centers of the mounting holes on the base plate is 88mm. The distance from the bottom edge of the base plate to the center of the lower mounting hole is 25mm. The distance from the top edge of the base plate to the center of the upper mounting hole is 38mm. The distance from the left edge of the base plate to the center of the left mounting hole is 40mm. The distance from the right edge of the base plate to the center of the right mounting hole is 40mm. The distance from the front edge of the base plate to the center of the front mounting hole is 40mm. The distance from the back edge of the base plate to the center of the back mounting hole is 40mm.



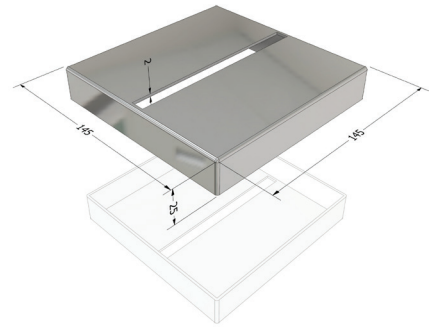
CAPPING SIZES AND DIMENSIONS



PSCFB90CB
PSCFB90CSS



PSCFB115CB
PSCFB115CSS



PSCFB140CB
PSCFB140CSS

DURABILITY

Pryda post anchors are Hot Dip Galvanised to standard AS/NZS4680.

Routine inspection and clearing any debris around anchors are an integral part of the ongoing care and maintenance.

Due to shallow base design, post anchors are recommended to be installed on suitable foundation above natural ground, i.e. not level with garden beds, lawn, and areas prone to accumulate ground debris or potential ponding areas. If in doubt seek advice from your consulting project Engineer for suitability before use. Only use anchor if deemed fit for purpose by project designer.

Refer to 'Installation Tips for more information.

STORAGE AND HANDLING

Prior to use, the Pryda products shall be stored in a weatherproof environment and protected from moisture. Care must be taken to avoid any damage to the surface of the product protective galvanised coating and profile that may impact performance.

APPLICATION AND SCOPE OF USE

Typical application for all Pryda Post Anchors is for attached open verandah or similar structures for dwellings.

All other usage not specifically mentioned within this product description sheet must be verified/designed by consulting Structural Engineer.



T-Blade direct post support



T-Blade with base cap post support

DESIGN CAPACITIES

Limit State Design capacities (ΦN_j) for Pryda Standard Post Anchors resisting loads are as follows:

	PTSB90				PTSB115				PTSB140			
	JD5	JD4	JD3	JD2	JD5	JD4	JD3	JD2	JD5	JD4	JD3	JD2
1.35G	31.8	36.7	43.2	49.8	62	71.5	95.8	120.1	86.8	100.1	108.4	116.7
1.2G + 1.5 Q floor	38.5	44.4	52.4	60.3	75.1	86.5	116	145.4	105.1	121.2	131.2	141.2
1.2G + 1.5 Q roof	43	49.6	58.4	67.3	83.8	96.6	129.4	162.2	117.3	135.2	146.4	157.6
0.9G + Wup	44.5	51.3	56.2	61.1	60.5	69.8	108.1	146.4	81.6	94.1	119.8	145.4

NOTES:

- The design loads tabulated above require that:
 - Design capacities in the tables are for steel, post and bolts to timber ONLY.
 - The timber post must bear on the Post Anchor base.
 - All post sizes to be minimum size matching selected T-Blade anchor, i.e. 90 x 90mm (PSCFB90), 115 x 115mm (PSCFB115), 140 x 140mm (PSCFB140).
 - Tie-down anchors, T-Blade, and timber post installed plumb.
 - Support foundation must be flat, level, and supporting base plate fully.
 - Fully fixed using all required bolt holes. Refer to Product Range table for required bolts for each anchor.
 - Bolts and all assembly components used are structural Grade 4.6 minimum.
 - Selected timber post itself should be of suitable design capacity to achieve the values stated for tension and compression.
- Select design capacity according to the governing load case for determining the design loads.
- Specified capacities are for concentric vertical load transfer only. Refer to each Post Anchor notes for recommended capacities for eccentrically loaded conditions with selected post anchors only.
- The base concrete and fixings to the concrete must provide sufficient resistance to the uplift forces and dead +live loads. Uplift capacities stated in this document are stated for steel and timber post ONLY, these capacities may be limited by anchoring methods to the supporting foundation, i.e. fastener type, wet concrete embedment depth, and concrete design. This should be designed and verified by the Project Engineer or designer prior to installation.**
- Wind uplift capacities are based on the AS/NZS1170.2 wind code.
- Post Anchors should NOT be assumed to contribute towards lateral bracing/raking stability of a structure in decks or stumps in sub-structure, unless pre-approved by a Structural Engineer.
- Post Anchors are not Intended to be used for cantilever posts, and free-standing structures, i.e. Carports and Gazebo, unless designed and approved by a consulting structural Engineer.
- Post must be laterally restrained at top, installed centrally to anchor, and deemed to be “fit for purpose” by the project Engineer.
- It is recommended to slope the foundation away from the anchor to prevent water pooling at the base.
- Do not cover exposed base plate and stem with debris or obstacles that will facilitate collection of debris around anchor base.
- Maximum post height 3m and ultimate limit state wind speed not exceeding 50m/s unless noted otherwise.
- Local settlement, ground water, and soil reactivity will cause isolated concrete footings to ‘TILT’ and therefore induce bending into the post stirrup stem. Isolated footing should be restricted to stable soil, i.e. Class A and S foundation classification to AS2870.

IMPORTANT:

READ THIS DATASHEET IN CONJUNCTION WITH PRYDA POST ANCHORS GUIDE AND REFER TO GENERAL NOTES AND LIMITATIONS.

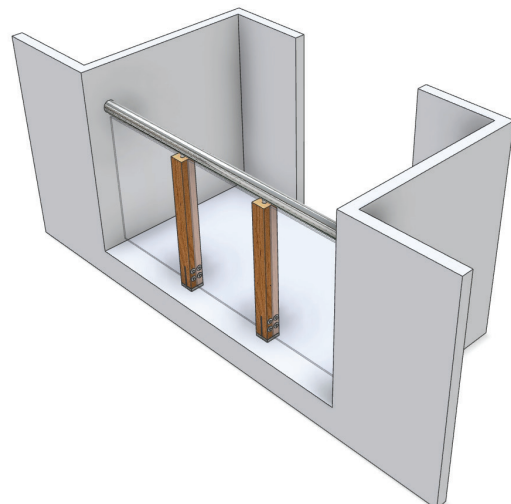
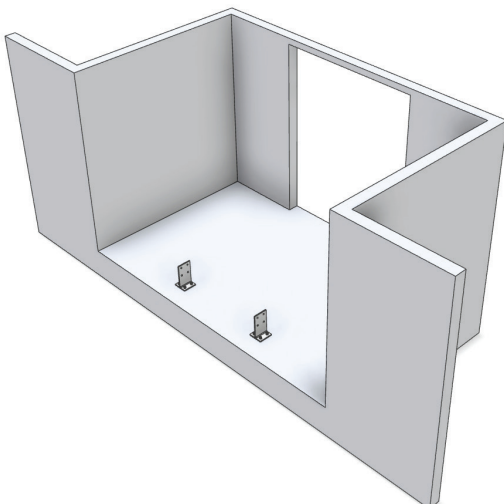
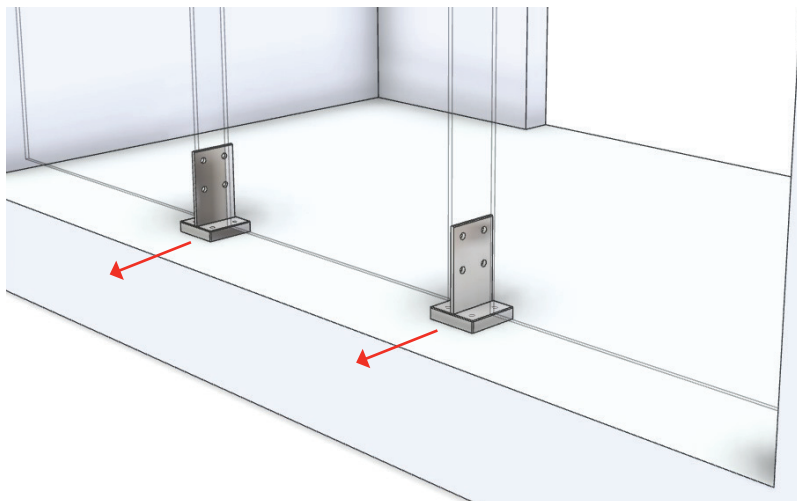
BALUSTRADE APPLICATION – LIMITED TO PSCFB115 AND PSCFB140 ONLY

Pryda T-blade (115mm and 140mm only) can be used to securely mount timber posts to concrete, steel, or timber beams. The preferred choice for balustrade support is using the stainless steel series. It is important that the connection of the balustrade anchor to substrate (supporting foundation) **MUST** be carefully designed and certified by the builder's consulting Engineer or balustrade designer at each anchor location. It is the sole responsibility of the consulting Engineer/Designer/Builder/End-user for the substrate design and selected base tie-down method as anchoring the balustrade plays a critical role for the stability, safety, and longevity of the balustrade. Because of this, the tie-down choice used must be compatible and fully complement the substrate construction methods set out by the project design Engineer/balustrade designer and connection details made available in the structural drawings, otherwise seek further Engineering advice from your balustrade designer.

Routine maintenance and inspection of each anchor point must be carried out on a regular basis to ensure continued performance. Balustrade ends must be terminated to a rigid and braced element such as a wall or braced return and not free-standing. Pryda T-Blade (approved series only) are only suitable for balustrade design in accordance with loadings in AS/NZS1170.1 Table 3.3 Section C3. The maximum height of the balustrade should be 1.5m unless approved by the project Engineer.

The T-Blade orientation at intermittent support should have the narrow edge facing the open space/void. End support anchors are not as critical as they are required to be secured to a braced element such as a wall or return that has been approved to resist the balustrade lateral loads.

The orientation of the T-Blade for balustrade application is important. Face the arrow edge towards the open space/void, external side.

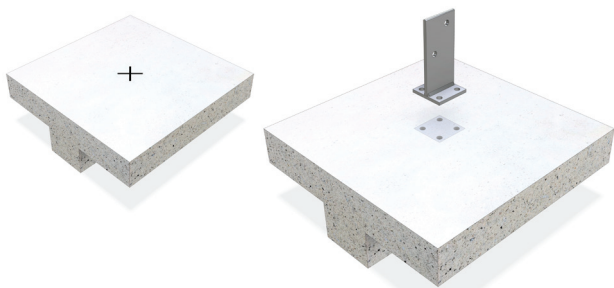


INSTALLATION – WITH BASE COVER ON 90mm POST



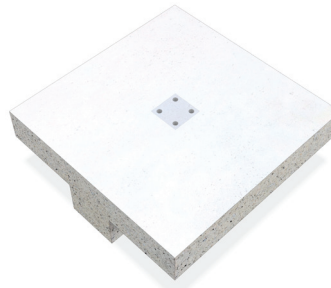
It is essential that the concrete design with selected concrete anchor embedment / type exceeds the expected uplift load. Anchor to foundation design to be determined by consulting project Engineer to suit design application, foundation type, and deemed fit for purpose. The design engineer should ensure the structural element can support the intended design loads.

STEP 1



- Orientate anchor as required, measure and mark location of base holes using selected anchor base as stencil.
- Ensure adequate concrete edge distance set back.
- Concrete foundation support to be level horizontally.
- Seek advice from your consulting project Engineer.

STEP 2



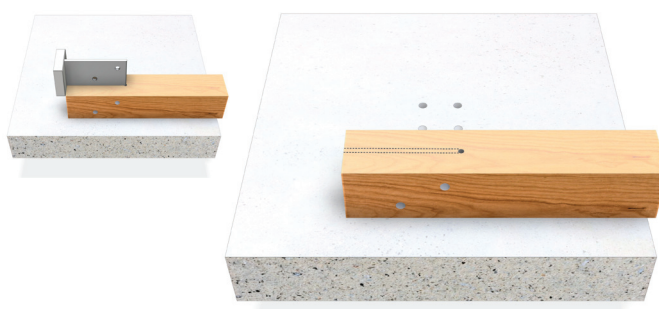
- Drill four holes at marked location to required depth for selected hold-down bolt. Refer to bolt manufacturer guidelines for recommended pre-drill hole size and depth. Suggested minimum screw embedment depth 100mm or greater (Section detail shown above).

STEP 3



- Use selected T-blade and base cap as template to mark bolt holes on to post.
- Ensure the capping is installed correctly, flushed with anchor base and T-Blade is located central to post.
- Drill through post with matching drill bit with selected anchor bolt hole size. Refer to anchor specifications for size.

STEP 4



- Flip the post 90 degrees and again using the T-Blade assembly as a template. Mark the slot position on to post, ensuring the slot is central to the post.
- Begin by drilling a 9mm pilot hole at the very top position of the marked T-blade.

STEP 5



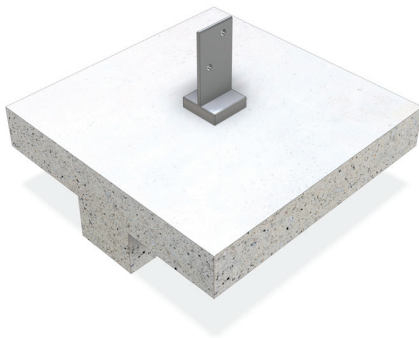
- Cut slot using a jig saw or hand saw for a snug fit.

STEP 6



- Install T-Blade into position using 4 approved concrete anchors.
- Ensure the selected anchors exceed the uplift requirements of the post design.
- Ensure sufficient concrete depth. When installing near concrete edge, ensure sufficient edge distance and consideration for cone failure.

STEP 7



- Install the matching capping over T-Blade.

STEP 8



- Install post onto T-blade and ensure the bolt through holes are correctly aligned.
- Insert bolt with washer through both holes.

STEP 9



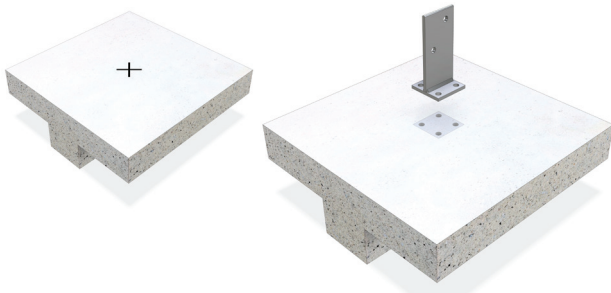
- Install washer and nut to bolt ends and hand tighten.
- Check post to ensure it is vertically plumb.
- Tighten all bolted assemblies.

INSTALLATION – WITHOUT BASE COVER ON 90mm POST



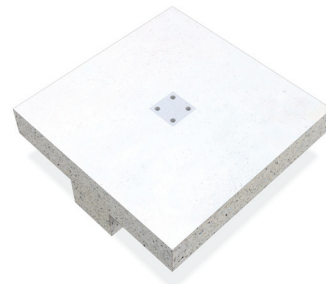
It is essential that the concrete design with selected concrete anchor embedment / type exceeds the expected uplift load. Anchor to foundation design to be determined by consulting project Engineer to suit design application, foundation type, and deemed fit for purpose. The design engineer should ensure the structural element can support the intended design loads.

STEP 1



- Orientate anchor as required, measure and mark location of base holes using selected anchor base as stencil.
- Ensure adequate concrete edge distance set back.
- Concrete foundation support to be level horizontally.
- Seek advice from your consulting project Engineer.

STEP 2



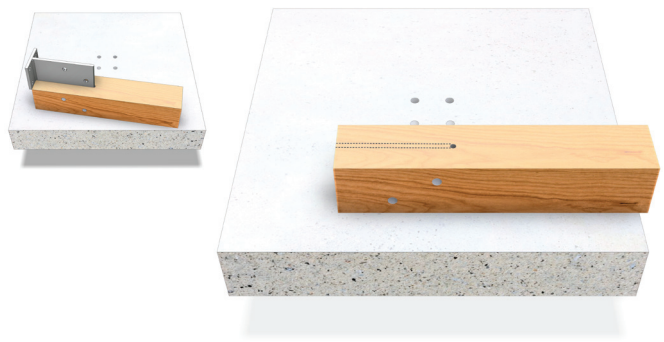
- Drill four holes at marked location to required depth for selected hold-down bolt. Refer to bolt manufacturer guidelines for recommended pre-drill hole size and depth. Suggested minimum screw embedment depth 100mm or greater (Section detail shown above).

STEP 3



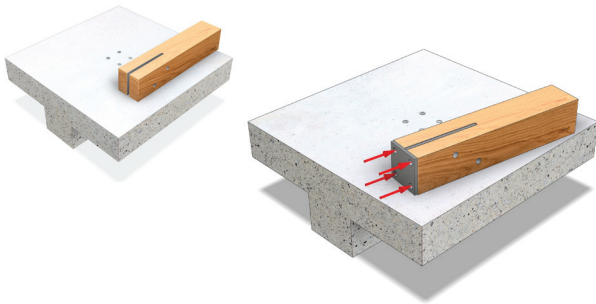
- Use selected T-blade as template to mark bolt holes on to post.
- Ensure the T-blade is installed correctly by locating the post end directly against anchor base and T-Blade is located central to post.
- Drill through post with matching drill bit with selected anchor bolt hole size. Refer to anchor specifications for size.

STEP 4



- Flip the post 90 degrees and again using the T-Blade as a template. Mark the slot position on to post, ensuring the slot is central to the post.
- Begin by drilling a 9mm pilot hole at the very top position of the marked T-blade.

STEP 5



- Cut slot using a jig saw or hand saw for a snug fit.
- Insert T-Blade into slot, align bolt holes on T-Blade to post. This can be temporarily secured by inserting bolts through all the pre-drilled bolt holes.
- Mark the 4 bolt holes to base of post using T-Blade as template.
- Route out the 4 holes to match the depth and diameter of the intended bolt head used to anchor the T-Blade onto foundation. This will allow the post to sit over the bolts heads and directly bear on to base plate.

STEP 7



- Install T-Blade into position using 4 approved tie-down anchors.
- Ensure the selected tie-down anchors exceed the uplift requirements of the post design.
- Ensure sufficient concrete depth. When installing near concrete edge, ensure sufficient edge distance and consideration for cone failure.

STEP 9



- Install washer and nut to bolt ends and hand tighten.
- Check post to ensure it is vertically plumb.
- Tighten all bolted assemblies.

STEP 6



- Trim the base slot edge with 6mm chamfer making allowance for the weld joints.
- Optional: depending on the installation application, the post end cut end with routed sections, and slot cut can be sealed using an approved sealant before installation. Seek advice from post designer or coating specialist for best practices. It is important the style of anchor support is fit for purpose.

STEP 8

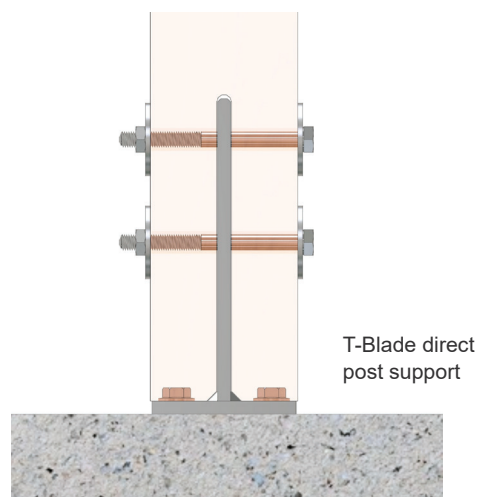


- Install post onto T-Blade and ensure the bolt through holes are correctly aligned.
- Insert bolt with washer through both holes.

INSTALLATION TIPS

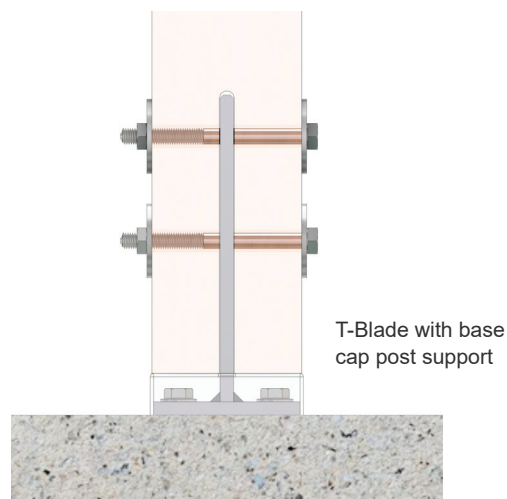
FOUNDATION SLOPE

- It is recommended to slope foundations away from the base of the Post Anchor all around.
- Avoid water pooling and build-up of debris around anchor base.
- Not suitable for foundation that is at the same level as natural ground unless deemed fit for purpose and approved by consulting design Engineer.
- Routinely clear away debris or any obstructions at anchor base on a regular basis.
- Tiling or paving around anchor is not recommended as this may result in a recess space around anchor that may facilitate water pooling and debris build-up.



BOLT LENGTH

- When using Hex Head Bolts for fastening your post, it is recommended to use a length 20mm longer than post side or have a minimum of 2 x thread pitch extend beyond the outward surface of the hex nut.
- Account for the thickness of the saddle, washer(s) and allow sufficient thread of the bolt to pass the hex nut.



CONCRETE FASTENERS

- For fixing to existing concrete, Pryda recommend the use of M10 Hex Head Ramset™ WERCS™ AnkaScrews™. AS10100WGM50 screw in anchor. Having a 100mm minimum length or longer dependent of application.
- Alternatively, Ramset™ M10 Galvanised Dynabolts can also be considered provided the connection is deemed fit for purpose by the project consulting Engineer. Product Code - DP10100GH or DP12100GH.
- Stainless Steel options:
M12: T12110SSX - TruBolt™ Xtrem 12mm x 110mm Stainless steel
- M16: T16120SSX - TruBolt™ Xtrem 16mm x 120mm Stainless steel

For detailed instructions on installation and design properties for fasteners and chemical anchoring, visit the Ramset™ website www.ramset.com.au

The suggested fasteners are only indicative only. Select the correct fasteners based on compatibility with anchor finish, anchor hole size, application, connection substrate and ensure capacity exceeds the required design capacity of the selected post anchor. Seek verification as required from the consulting design Engineer for each project.