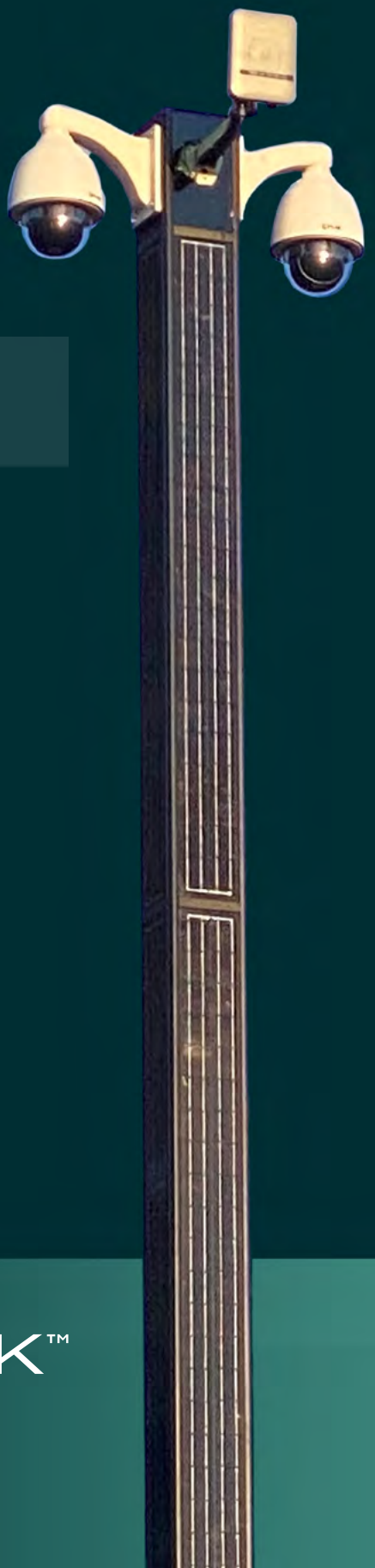
Installation Guide



Solar Reimagined.

POWERSTACK™

Required Equipment

Installer to provide

General tools

Battery drill & impact driver

Wrench / Shifters 12" and 6"

Allen key sets

Ring spanner sets

Min 45 joule jackhammer

Generator or power outlet

For use with jackhammer.

3/8th socket for battery drill

Star picket driver

Angle grinder

Required Equipment

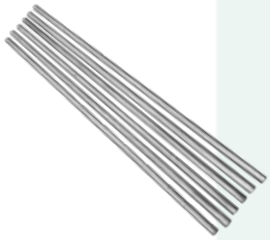
PowerStack Equipment

PowerStack pole and base

Concrete-free foundation plate (CFF)

Dimensions: 400mm x 400mm

Micropiles for CFF

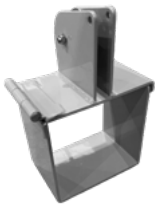


Dimensions: 2000mm long, Ø42mm outer

Power Gin winch

Dimensions: 1500mm (h) x 400mm (w) x 700mm (l)

Power Gin grip sleeve^

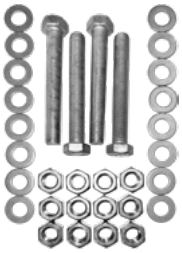


Dimensions: 200mm x 200mm

5/16 stainless steel tek screw x6

M10 bolts x6, Nylock nuts x6 and M10 washers x12

M20 bolts x4, M20 nuts x12 and M20 washers x16



Required installation equipment and PowerStack equipment images and names are indicative. PowerStack pole design, hinge base system, concrete-free foundation size and associated number of micropiles is determined by your specified design. Concrete-free foundation, micropiles and Power Gin system only included when ordered as part of your design.

^Includes rubber inner and pulley system.

Setup Overview

A PowerStack pole installs in minutes.

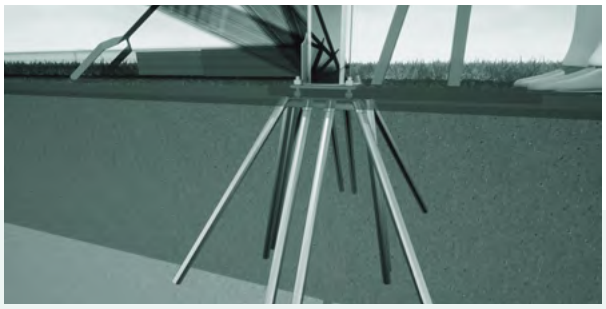
Before starting the installation process, a groundscan should be completed to check for utilities in the area. Installation staff should assess the area for any risks or obstructions in the installation site that could impact safe installation or sunlight access, for example trees or overhead power lines. We recommend all installation staff wear appropriate PPE (personal protective equipment).

Please refer to the geotechnical report, relevant specification and design plan, and technology payload instructions alongside this guide for correct installation of your chosen PowerStack System.

1

Install Foundation and Base

Concrete-free foundation installed using base plates and micropiles. Relevant technology payload attached to the pole. PowerStack pole secured to base plate using hinge system



2

Winch Pole Upright

Winch apparatus secured to the base plate system using supplied equipment. Winch pole into upright position.

3

Secure Pole

Pole anchored to bolted base. Remove winch apparatus from base and pole. Replace removed earth. Pole ready.

Images and steps shown in this document are indicative as an example installation only.

Install Foundation and Base Step 1

Prep Foundation

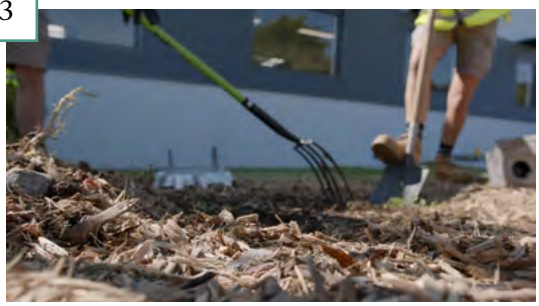
1

Install four M20 anchor bolts as per PowerStack bolt circle. Use washers on the top and bottom with nuts on top. Do not tighten.

2

Mark out a 600mm by 600mm square where the pole is being installed.

3



Excavate/dig down to around 100mm to 130mm and keep as level as possible. Refer to project drawings to confirm specified depth of foundation plate.

4

Place the concrete-free foundation plate into the excavated hole and measure off to a rough level position to suit project specifications.

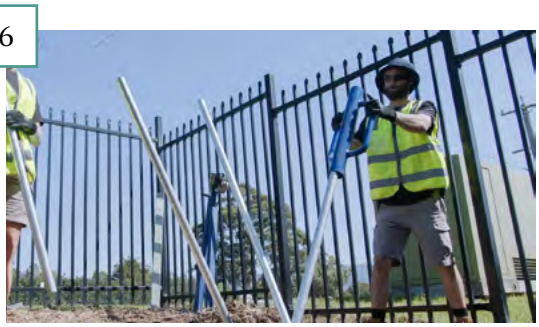
Install Foundation and Base Step 1

Pile Install

5

Place prescribed number of piles into foundation collars with even spacing, beginning with opposing corners and sides.

6



Use a star picket driver to get the micropiles started, moving from one pile to its opposite to ensure balanced anchoring pressure.

7

Continue pile embedment with a minimum 45 joule jackhammer. Then use an impact driver or drill to screw in the supplied high tensile screws to secure each pile.

A note on micropile refusal

If any piles refuse further motion during install, mark 15mm up from CFF and jackhammer for 15 seconds. If the marked line is no longer visible, continue jackhammering. If the mark is still observed, you have pile refusal. Cease jackhammering and grind off pile excess. At least 75% of allocated piles must be embedded until refusal with a minimum of 1.2m in the ground.

Install Foundation and Base Step 1

Base Plate Install

8

Place the concrete-free foundation plate into the excavated hole and measure off to a rough level position to suit project specifications.

9

Now use four M20 nuts and washers added on to the 4 threaded rods to locate the stainless steel hinge base plate above the foundation plate as shown. Ensure to leave at least 38mm of the rods above the top of the nut (approx. 65mm above the top of the base plate) to allow for winch attachment later.

10

Once the hinge base plate is in place, tension the M20 nuts to secure the bolts onto the foundation plate using either a 300mm shifting spanner or a large M24 spanner to tension the bolts tight.

11

Use the remaining 4 nuts and washers to tension the hinge base plate to the foundation, utilising the spirit level to ensure this hinge base plate is level.

12

Locate the PowerStack pole to align the hinge system and use the hinge pin to secure the hinge plates together.

Winch Pole Upright

Step 2

Read prior to commencing Step 2

This step is to be completed after installation of interior and exterior payload technology, as per your specified system design. PowerStack recommends having the pole elevated on a workhorse or similar during wiring of payload and installation of pole. Ensure system is activated, then seal and close using top cap once payload installation is complete.

Erecting PowerStack

1

Place the Power Gin winch system into position as shown and place four M20 washers and nuts to attach the winch system to the anchor bolts in the foundation plate. Tension these nuts to secure the Power Gin winch system securely in place.

2

Measure up from the base of the pole to approx 2.5m and secure the "Power Gin Grip Sleeve" to the pole, using the supplied rubber insert. Lock the "Grip sleeve" into position using the built in fastener, ensuring a tight grip to the PowerStack pole.

3

Use your battery drill with a 3/8" socket attachment to unwind the winch cable and feed these through the pulleys. Secure cables back to the Grip Sleeve using the supplied cable clips and fasten system with pin, bolted in place.

4

Ensure the PowerStack pole is elevated a minimum of 15 degrees off the ground and use your battery drill with socket attachment to winch the pole into full vertical position.

Secure Pole

Step 3

Anchoring Base

1

Keep the Power Gin winch system connected to the pole whilst utilising the 3 sets of M10 bolts, nuts and washers on opposite sides to secure the 2 hinge plates together.

2

Once three sets of the M10 bolts are secured, the Power Gin winch and Grip Sleeve can be removed from the foundation plate anchor bolts.

3

Secure the remaining 3 sets of M10 bolts nuts and washers to the hinge plates.

4

Level off the surrounding ground, filling in the excavated hole.

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