

PowerStack™ System - Installation Guide field notes

See below for some handy tips and recommendations on how to quickly and safely install your PowerStack system. *This document is ONLY FOR USE alongside the Installation Guide and should not be used as a standalone document.*

PowerStack System - Installation Guide field notes

1. Installation teams and partners have identified that the following items are needed:
 - a. Both standard and right-angle battery drills, plus the impact driver
 - b. 2.5m A-frame ladder
 - c. Saw/workhorse
 - d. DC voltmeter
 - e. Shifting spanners, Phillips head screwdriver, and suitable screwdriver for security screws
 - f. Permanent marker
 - g. Felt blanket to prevent scratches to pole during installation
 - h. Reciprocating saw
 - i. Shovel
 - j. Reciprocating saw or hacksaw with metal blade (in case you need to trim micropiles)
 - k. Large Channellock pliers
 - l. Strap & pad
 - m. Hilti bit
 - n. Heavy-duty gloves for handling extrusions
2. If you've ordered a PowerStack system with a Concrete-free foundation (CFF), you'll need a shovel/spade to excavate down to the right depth and spray paint to mark out your installation site.
3. Please note the Power Gin winch system, which includes a grip sleeve and pulleys, must be ordered separately.

Notes to Step 1: Installing the foundation and base

Step 1, Point 2: Ensure installation site is in full, direct sun from morning to evening, and has enough space for you to lay the pole flat before you attach it and winch into position.

Step 1, Point 6: We recommend driving the piles about 100mm into the ground before you start with the jackhammer. You can use the permanent marker to measure this.

Step 1, Point 7: When jackhammering the micropiles, it's best to do this in two drives to get an even base. Drive each pile approximately 600mm on the first drive, moving from opposite corners (you can use the permanent marker to mark these points). Then driver of the pile on the second drive.

Once piles are secured, consider backfilling the piles and foundation plate with excess soil to catch mounting hardware during pole installation. If refusal occurs, grind or cut (using a reciprocating saw, hacksaw or similar) off the excess being careful not to damage the foundation plate.

Step 1, Point 9: When you add the hinged base plate to the M20 nuts and washers (remembering to leave 35mm of threaded rod shown above), the hinge is facing the correct direction for you to attach the pole.

Step 1, Point 11: When securing the hinged base plate in place, refer to the drawings for hardware specifications so the Power Gin winch can be properly attached.

Step 1, Point 12: If you need a little extra help securing the hinge pin in position, a Dremel tool or jackhammer can vibrate this the remainder of the way through. Also, if you're finding the M20 nuts are impeding fitting the hinge, you can remove these two and refasten them afterwards.

Installer provided equipment:

1. Note that a 45-joule jackhammer may also be called a 33.2 ft-lb jackhammer equipped for a 25mm bit and chuck
2. Note that a star picket driver may also be called a fence post driver

PowerStack provided equipment:

1. Note that all PowerStack systems 3m and taller come with a levelling base plate, hinge pin, and the set of M20 mounting hardware
2. If ordered, all concrete-free foundation systems come with the foundation plate, a set of micropiles matching engineering specifications for pile number and length, TEK screws for fastening the micropiles to the base, and a jackhammer bit
3. If ordered, the Power Gin winch apparatus comes with the grip sleeve. (See also note about 2x4 piece of wood in Step 2, Point 2)

Notes to installing your chosen technology payload(s)

All payload installations should be carried out by a qualified electrician and in adherence to the install instructions from the payload provider.

1. Please refer to the wiring diagram for PowerStack poles and any specific system drawings. Before making connections and powering the system, use a DC voltmeter to ensure proper polarity and confirm power.
2. Ensure that the payload wire runs are appropriately positioned to reach their terminals once the control box is seated in the pole. PowerStack typically recommends leaving 1.2m of wire from the payload for top-mounted devices.
3. Only after all payloads are electrically connected and fastened to the pole as designed, firmly engage the circuit breaker in the control box to activate and energise the system.
4. While the pole is winched down, log into the controller(s) app to verify operation and settings.
5. Keep in mind that all PowerStack poles are shipped with battery capacity at or below 30% to comply with safety requirements. Depending on weather conditions, it may take a few days for the system to reach full charge.

Notes to Step 2: Winch Pole Upright

Step 2, Point 1: Ensure safe and sufficient clearance for the winch apparatus and the installation team on the side of the foundation opposite the hinged base when winching the pole into position.

Step 2, Point 2: Take care to ensure the grip sleeve does not scratch the pole. To provide additional support for the grip sleeve, insert an 2.4m long 2x4 piece of wood on top of the pole between the tongue of the base plate and the grip sleeve to provide a resting point for the sleeve when winching at lower angles.

Step 2, Point 3: When attaching the winch equipment and before winching, we recommend positioning your saw/workhorse as close to the grip sleeve as you can, to relieve stress on the winch apparatus. Before commencing winch drill, make sure there are no cables, stones, or other obstructions on the hinge base plate. The area should be clean and free of materials so the pole sits flat when fully upright.

Step 2, Point 4: Make sure to keep all other materials/clothing clear of the winch to avoid items getting caught as the steel wire is reeled in.