



# 5B MAVERICK

**What would a solar farm look like, if we reinvented it today?** 5B started with a clean slate and developed the simplest, fastest way to deploy PV modules into the field. Our answer is the Maverick: a modular PV system built up from our 12 kW MAV array blocks.

Maverick is the solar farm of the future: A pre-fabricated, low-cost solar array that shifts construction, labour and risk from the project site into the factory.



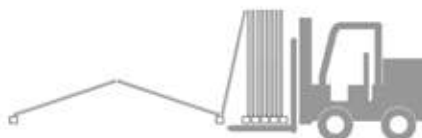
## 100% Prefabricated

The MAV DC solar unit arrives on site entirely electrically and mechanically prefabricated, simplifying design, slashing site time and labour.



## Streamlined Logistics

MAV streamlines solar array procurement to a single source and simplifies on-site logistics: four MAVs ship in a standard 20 ft container.



## Rapid Deployment

A MAV unit is deployed with a standard site vehicle in six minutes, with a crew of two, with minimal site preparation. Our continuous array means no trenching for DC cables.



## Portable Solar

5B's MAV is the only cost-effective, portable solar array that unlocks the possibility of a solar fleet, giving customers control of how they use their site and solar in the future.



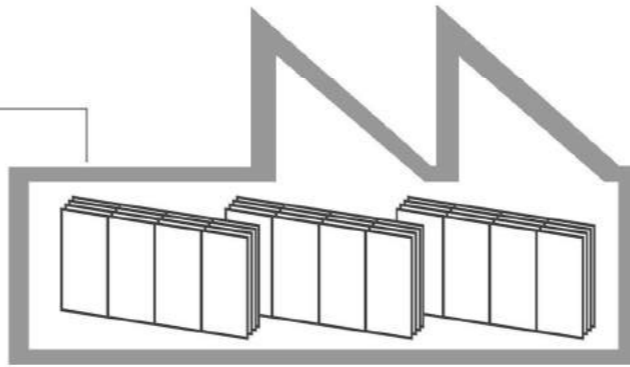
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## Prefabricated in our factory

Maverick is the solar farm of the future: a modular PV system built up from our 12 kW MAV array blocks. We've slashed costs and project risks, by moving the bulk of work from the field into a safe, controlled, low-cost factory environment. 5B's two-person teams assemble one MAV every five hours.

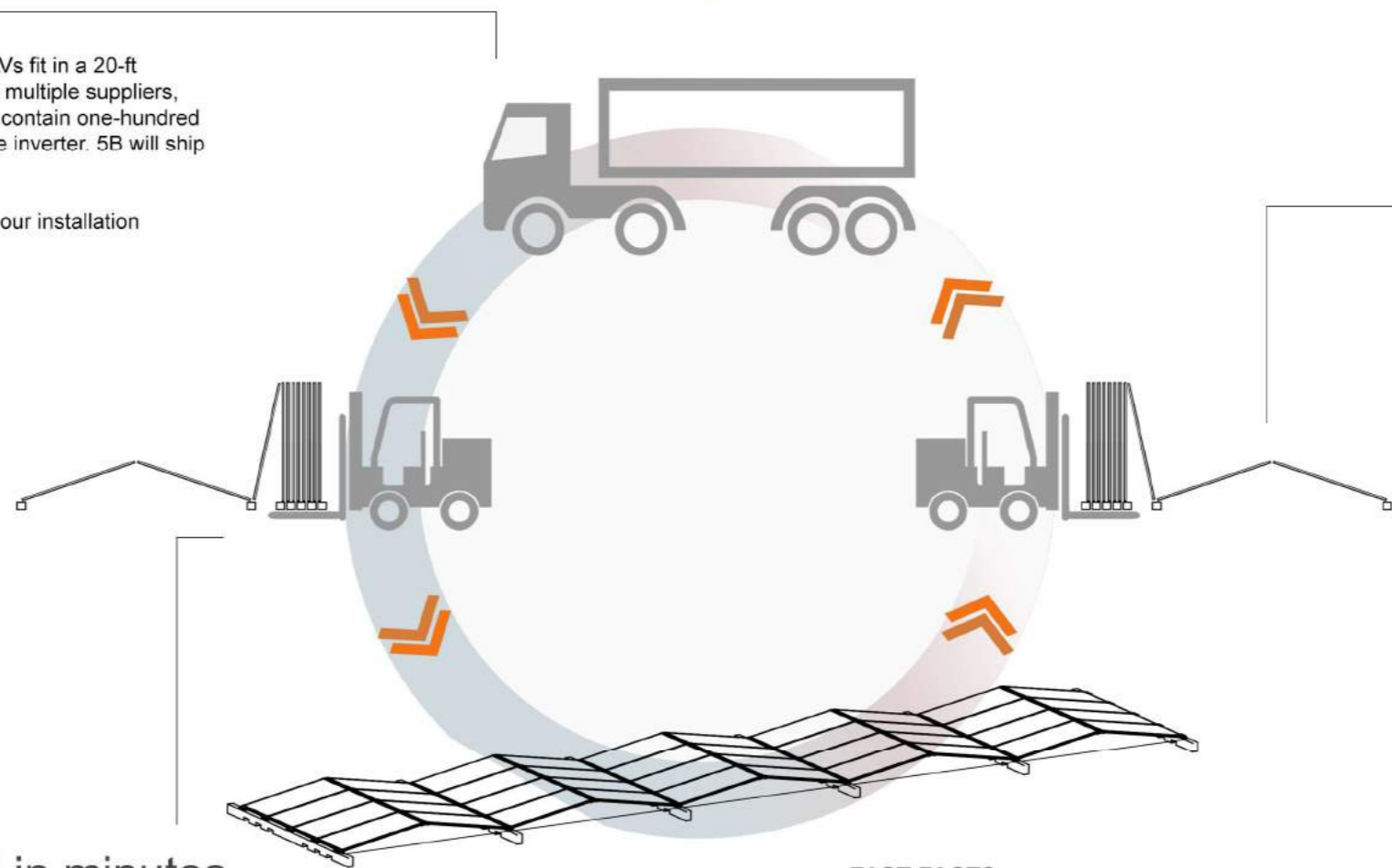
5B's Sydney factory produces 120 kW of MAVs per day, or 30 MW per year. Because Maverick is a modular solution, you get full flexibility in the design of the DC array, cabling runs and inverter locations.

Each MAV leaves the factory pre-commissioned, fault-tested and electrically complete up to the MC4 connectors for each string. A plug-and-play DC cabling solution and pre-fabricated inverter stands also reduce cabling costs and on-site electrical work.



## Optimised Logistics

- 1 The MAV ships in standard shipping containers: Four 32-module MAVs fit in a 20-ft container. Instead of managing complex shipping arrangements with multiple suppliers, the MAV drastically simplifies on-site logistics: your 5B shipment will contain one-hundred per cent of your solar farm components, up to the AC terminals of the inverter. 5B will ship your MAVs on flatbed trucks for smaller applications.
- 2 MAVs can be stored on site before deployment, adding flexibility to your installation schedule.



## Deployed in minutes

- 3 Before we deploy a MAV, we survey the site with a drone. We then mark out the locations for the recycled rubber pads, which act to level the concrete beams.  
  
Like everyone in solar, we like flat sites the best! We can also handle sites with more challenging terrain, contact us for more information.

- 4 5B deploys each MAV on site with a five-tonne telehandler or forklift, in less than 10 minutes. A three-person deployment crew deploys 100 kW per day or one megawatt in 10 days.
- 5 When deploying, the leading MAV is secured with 2 ground anchors, and the following units are daisy-chained. Our concrete beams provide full wind-rated ballast so these are our only ground penetrations.

### FAST FACTS:

Due to the continuous array design, a plant built using the Maverick system can generate more MWh per hectare than conventional fixed tilt and single axis tracking designs- between 180-200% more.

Each MAV is ballasted, with minimal ground penetrations, so it can go places that are off-limits for most solar farms. 5B is deploying our Maverick solution on landfill sites and tailings dams for mines.

5B has even made the factory mobile: for your next project we can ship you MAVs or a MAV factory, using our containerised assembly pods.

## About 5B

5 billion years of sun. How will you use it? 5B are re-inventing solar energy from the ground up. We are a team of renewable energy experts who care about making energy projects cheaper, faster and smarter.

For pricing and ordering:

Visit our website: [5b.com.au](http://5b.com.au)

Email us: [info@5b.com.au](mailto:info@5b.com.au)

Call us: (02) 9550 9239



## Relocated to your next site

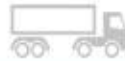
- 6 We remove the MAVs from site with the reverse of our deployment process, in the same timeframe. Each MAV is reloaded into shipping containers and ready to be relocated.

The Maverick solution is certified for installation in wind regions A,B and C, with minor additional ballast in wind regions B and C. 5B has a heavy duty Maverick design on its way for wind region D, contact us for more information.





Efficient pre-assembly cuts on-site labour by more than 50%

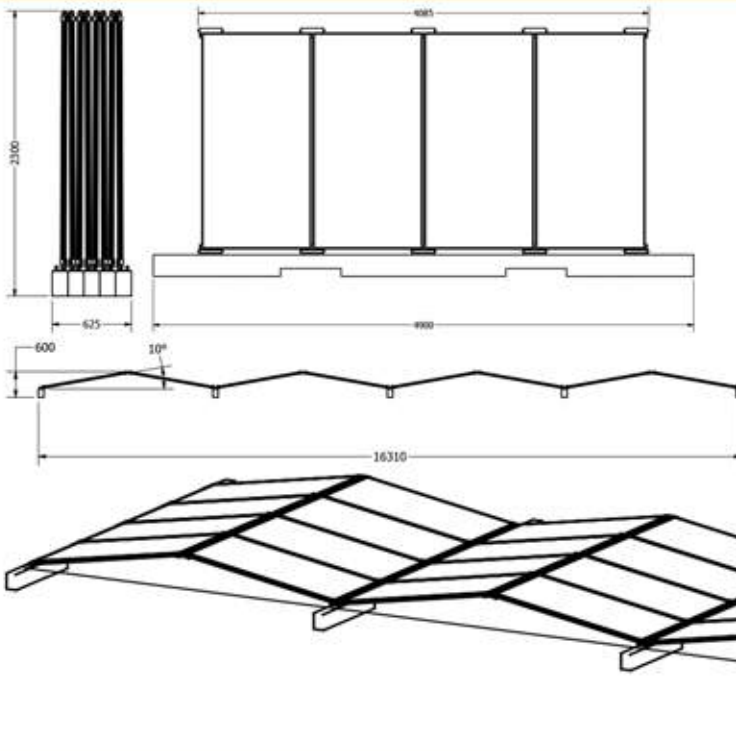


Arrives on site mechanically and electrically prefabricated



Rapidly deployed on site in under 10 minutes

### MECHANICAL SPECIFICATIONS



Module Dimensions	1956 x 992 x 40 (mm)
Module Configuration	32 modules per FEWA, 4 wide x 8 long
Packing Configuration	32 modules per unit, 3 units per 20' HQ container
Dimensions	4900 (W) x 600 (H) x 16,310 (L) mm deployed
Installation type	Telehandler or forklift, with 2 installers
Tilt Angle	10 degrees, excluding ground variation
Weight	2400 kg per FEWA
Module connections	Anodised aluminium alloy hinges, module clamps
Tethers	Stainless steel cable
Ballast	Precast 40MPa reinforced concrete beam
Peak wind velocity	Wind region A (60 m/s). Certified for installation up to wind region C, with minor additional ballast
Beam-beam tolerance EW	Maximum 690mm
Beam-beam tolerance NS	Maximum 48mm

Specifications subject to technical changes © 5B Australia Pty Ltd. 5BAU\_2016-12\_ver01\_EN

### ELECTRICAL SPECIFICATIONS

#### MODULE

PV Module Type	Jinko JKM350M-72	
	STC	NOCT
Maximum Power (Pmax)	350Wp	262Wp
Maximum Power Voltage (Vmp)	39.1V	37.2V
Maximum Power Current (Imp)	8.94A	7.05A
Open-circuit Voltage (Voc)	47.5V	46.0V
Short-circuit Current (Isc)	9.38A	7.46A
Module Efficiency STC (%)	18.01%	
Operating Temperature(°C)	-40~ +85	

#### ARRAY

Power at MPP	11.2 kW
Short circuit current	9.4 A per string, 18.8 A array output
Open circuit voltage	760 V
Current at MPP	8.9 A per string, 17.9 A array output
Voltage at MPP	626 V
Power Density	1.1 ha/MW <sup>2</sup>
String Configuration	16 modules, 2 strings (1 east, 1 west)
Terminations	2 x MC4 connectors
String return cable	6mm x 20m

<sup>2</sup> Fixed tilt 3.0 ha/MW (NREL)

### CERTIFICATIONS

Australian Patent #2015327772, Intl. Patents Pending.

Compliant with Australian Standards and CEC Solar installation guidelines [ AS/NZS 5033, AS 1170.0, AS 1170.1, AS 1170.2, AS 1664.1, AS 3600, AS/NZS 3000, AS/NZS 4777:2005, AS/NZS 1768:2007, AS/NZS 4509:2009].

Structurally certified for transport and operation in wind regions A, B and C to the aforementioned standards.

NOTE: Please read the Installation Guide before using the product.



#### ABOUT 5B

5B is an Australian engineering team dedicated to developing cutting-edge technologies that reduce the cost of renewable energy. 5B's Maverick is the only re-deployable solar array that is cheaper and faster to install than conventional solar.

Contact: info@5b.com.au Website: www.5b.com.au

