



# POWERSTACK

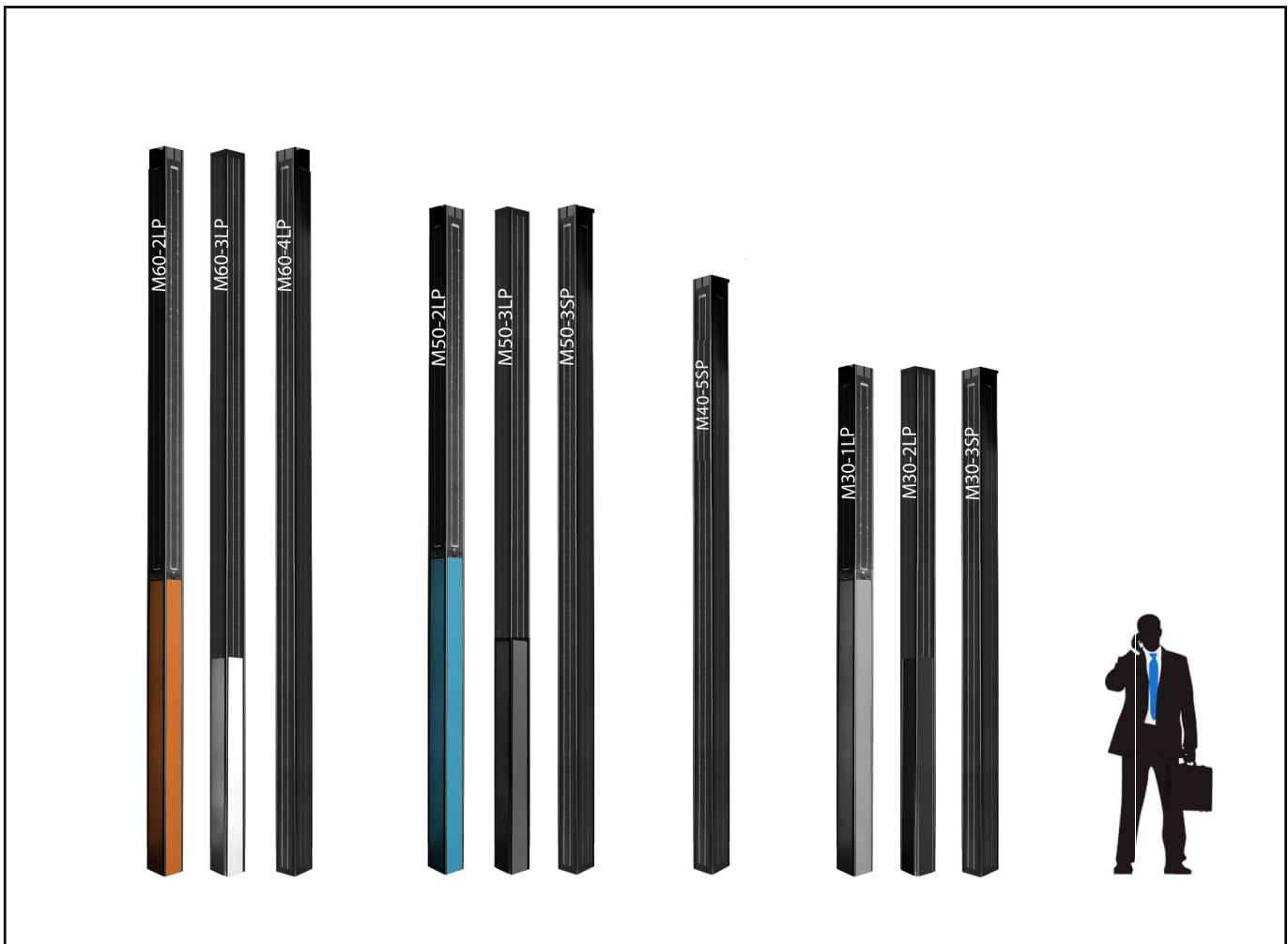
DECENTRALIZED POWER SYSTEMS

## Introduction

A 100% off grid solar powered column capable of powering virtually anything outdoors. Powering any manufacturers Security, Lighting, WIFI & Communication systems along with any IoT, Smart City devices and Sensors, small to medium scale EV and Wireless device charging without the need to run any underground cable or deal with utility connections

Sleek elegant architectural in nature to blend the column into the surrounding environment. Jazz it up with infill aluminium composite panels in a variety of colours, local artwork, advertising or city logos.

With cutting edge highly vandal resistant, shatter proof GLASS-LESS solar panels built to harvest more sunlight in a vertical position all whilst maintaining a strong elegant architectural presence.



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### Ordering Information

APS	Pole type*	Solar Panels	Energy storage	Operation Profile	Finish	Infill Panel Options	Height extension Options
APS-PowerStack	M10	1LP4 = 1 large panel	1LFP, 2LFP	DN=24/7	BJA = Black	MB = Metallic	300 = 300mm (12")
	M15	2LP4 = 2 large panels	3LFP, 4LFP	FN = full night	Anodise	Black (standard)	600 = 600mm (24")
	M30	3LP4 = 3 large panels	5LFP, 6LFP	9hr night	NLA = Natural	MS = Metallic Silver	1000 = 1000mm (36")
	M45	4LP4 = 4 large panels	7LFP, 8LFP	9-1	Anodise	MW = Metallic White	1200 = 1200mm (48")
	M60	5LP4 = 5 large panels	9LFP, 10LFP	9-2	PC= powder coat	MI = Mirror	1500 = 1500mm (59")
	M75	6LP4 = 6 large panels	11LFP, 12LFP	9-3		WG = Wood grain	2000 = 2000mm (79")
	*	7LP4 = 7 large panels	13LFP, 14LFP	9-4		SB = Standard Blue	
		8LP4 = 8 large panels	15LFP, 16LFP	6hr night		SG = Standard Green	
		9LP4 = 9 large panels	17LFP, 18LFP	6-1		SY = Standard yellow	
		10LP4 = 10 large panels	19LFP, 20LFP	6-2		SO = Standard Orange	
		11LP4 = 11 large panels	21LFP, 22LFP	6-3		SR = Standard Red	
		12LP4 = 12 large panels	23LFP, 24LFP	6-4			
		13LP4 = 13 large panels	25LFP, 26LFP	3hr night			
		14LP4 = 14 large panels		Lithium iron phosphate	3-1		
		15LP4 = 15 large panels			3-2		
	16LP4 = 16 large panels			3-3			
	17LP4 = 17 large panels			3-4			

Example: APS-M45-2LP4-4LFP-FN-BKA

### Dimensions

Model No.	L		W		H1		H2		Weight	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(Kg)
HEIGHT M10	6.9	175	6.9	175	34	900			55	25
M15	6.9	175	6.9	175	60	1500			88	40
M30	6.9	175	6.9	175	120	3000			165	75
M45	6.9	175	6.9	175	180	4500			198	90
M60	6.9	175	6.9	175	240	6000			264	120
M75	6.9	175	6.9	175	300	7500			310	140
SOLAR 1LP4					60	1500				
2LP4					120	3000				
3LP4					180	4500				
4LP4					240	6000				
5LP4					300	7500				

#### NOTES:

H1- Load mounting height and may vary slightly

H2 - Aluminum in-fill panels are required for some systems

The pole height is dependant on wattage, run time and region- refer to local agent for detail

H2 - Calculates the difference between H1 height dimensions M10,15,30,45,60,75 & H1 Solar 1,2,3,4,5LP4 dimensions ( Example M60-2LP4 means 6M pole with H2 = 3000mm, 118 inches)

WEIGHT- NOTE, all weights are estimates only and will depend on amounts of batteries and panels used

H1

GLASSLESS SOLAR MODULES

H2

MODEL: M45-2LP4

### Notes

- 12 Volt DC, (24, 48, POE available also).
- Coating- Architectural 2 step anodising UV and weather resistant
- Infill panels can be substituted with local artwork, advertising, way finding Ask your local distributor for details
- Large panel refers to panel size. All systems solar panels are designed to the minimum sunlight hour for that region
- Pole heights are Nominal. Actual heights are listed on this data sheet under the table "dimensions".

6 LFP refers to Lithium iron phosphate technology. The number in front refers to the quantity. All systems have been sized for a back up of 5 days based on the load and panels selected.

7 Other body colors available upon request as powdercoat options.

\* Pole Height - All sizes in model no. are nominal sizes, see dimensions table for actual heights

\*\* Height Options - total maximum height of Anchor base pole is 8.7 meters = 28.6Ft higher poles available upon request as a custom order

Valen Energy LLC reserves the right to make changes at any time in order to supply the best product possible. See also warranty and terms and conditions for further sale information.

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### Performance Data

Performance varies depending on location, power requirement and run profiles. Please refer to your countries Zonal data sheets for performance information. Systems are designed for worst case sunlight conditions for your geographical location, systems are designed to have a 10 year warranty including batteries with a 12 year life expectancy for 90% of the worlds regions. All systems are designed with a 5 day back up for inclement weather.

### Installation Data

**TAP ROOT FOUNDATION-** Systems come with an optional Tap Root Concrete free foundations which install in around 30 mins without the need to excavate or remove dirt. These systems are designed to withstand Tropical wind zones. Geotechnical reports required for foundation certification.

**WINCH-** Crane free operation is achieved through our base hinged pole and braking winch system. 12VDC winches available upon request. See our installation guide for further details

Refer to Valen Energy's POWERSTACK Installation data sheets for further detail. The anchor can be mounted to an existing concrete slab ( Engineering will need to be carried out locally to determine feasibility )

### Features & Characteristics

**APPLICATIONS** - Powering any manufacturers Security, Lighting, WIFI & Communication systems along with any IoT, Smart City devices and Sensors, small to medium scale EV and Wireless charging systems.

**CONSTRUCTION** - Stainless steel base hinged pole with 6000 series T6 Aluminium extrusion. Passive cooling and natural cleaning of the vertical solar panels with internal batteries and electronic components physically accessed from the top of the pole

**SOLAR PANELS** - Vertically mounted cutting edge glassless solar panels that will never shatter and are as vandal resistant as possible all whilst increasing panel efficiency and sunlight harvest when compared to glass type solar panels.

**BATTERIES LIFEPO4-** Valens Lithium Batteries have been designed for long service life to achieve a 10 year warranty ( 12 year life expectancy ) for all components

**ELECTRICAL** - All electronics are located inside the pole for maintenance and accessibility. Solar controller utilises WIFI and bluetooth for historical data and changing parameters wirelessly. 4G backhaul available

**MOUNTING** - Crane free winch system allows the system to be erected quick and easy. The based hinged anchor base is made from 316 stainless steel. All powerstack poles come 98% assembled ready to bolt on your CCTV, Lighting system etc and winch into position

**FINISH** - Architectural anodised 2 step process in natural and Black. Standard colors is Natural anodise. RAL and custom color matches are available as options.

**WARRANTY** - 10 year warranty \* extreme temperature locations will have a 7 year prorated warranty for batteries and electronics

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