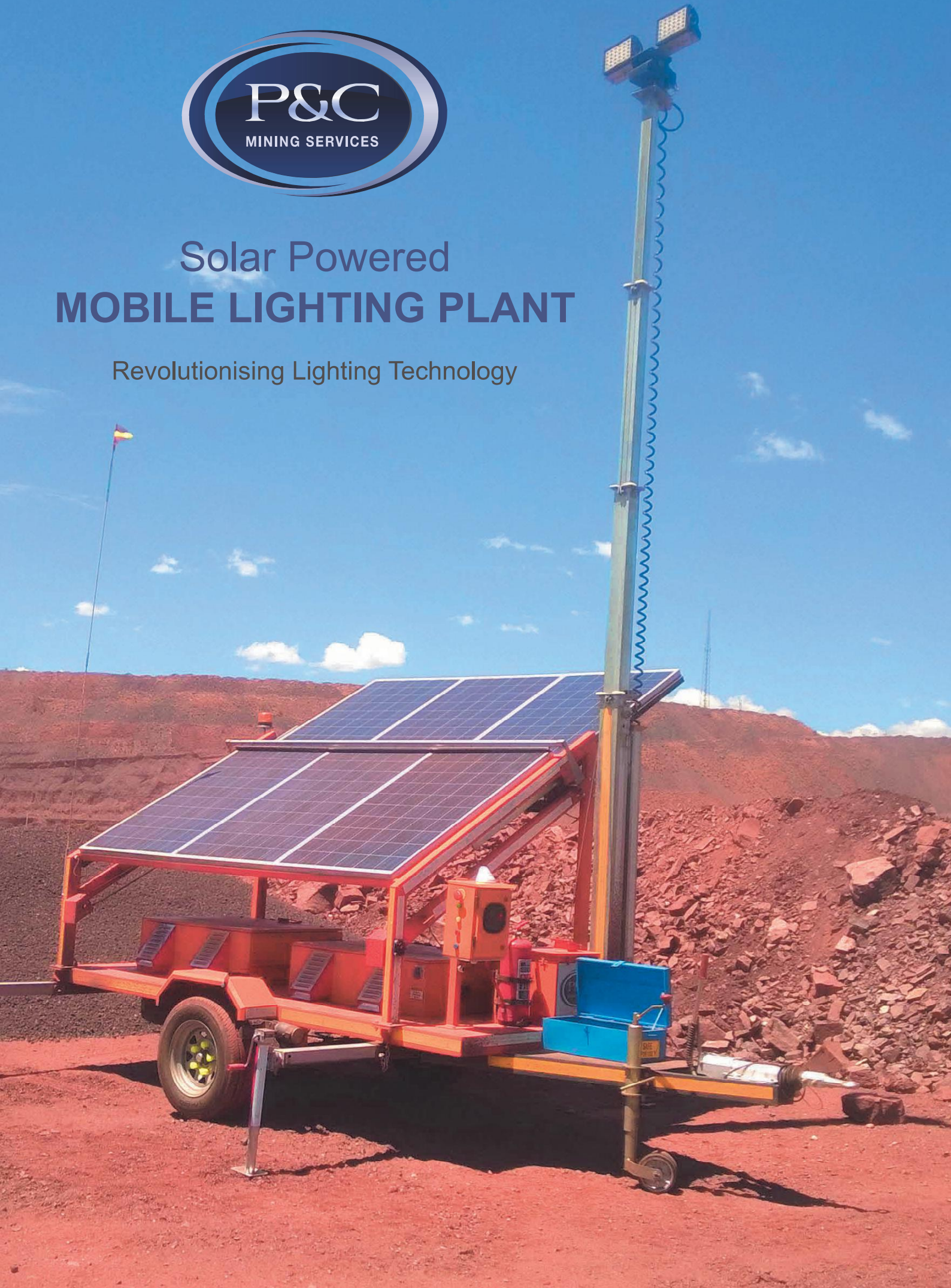




Solar Powered **MOBILE LIGHTING PLANT**

Revolutionising Lighting Technology





Solar Powered

- 6 solar panels provide current to a charge controller which charges a pack of Li-Ion phosphate cells.
- The panels retract into a stack to allow for easier and safer mobility of the lighting plant.
- The panels are self-cleaning during their deployment process to ensure that they can operate at optimal efficiency when charging.
- 80 Li-Ion Phosphate cells are installed on the unit, each providing a peak power charge of 1530W.
- Total energy storage 25,6kWh.

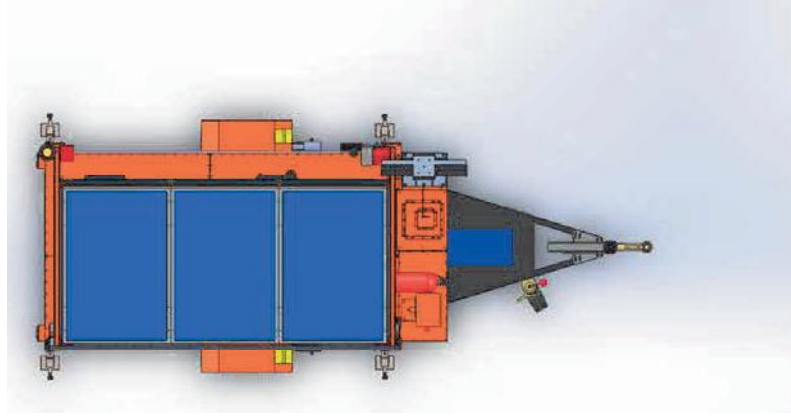
LED Lighting

- High efficiency LED lights
- Installed on an actuated pan and tilt base with an operation capability of 360 degrees to the horizontal and 90 degrees to the vertical axis.



TRAILER GENERAL DIMENSIONS - SCALE 1:45

LIGHTING	
2 x 150W 24V DC LED Lights	
60 LED'S 40° Wide Beam	
29 580 Lumens	
IP 68 RATING	
50 000hrs LED Lifespan	
15,6 G Vibration Rating	
SOLAR SYSTEM	
6 x 255W Solar Panels	
Solar Panel Deployment System	
Victron Solar Charger	
Victron Charge Controller	
Battery Management System	
ABB Programmable Logic Controller	
BATTERIES	
80 x 3.2V 100AH Lithium Ion Cells	
Maintenance Free	
Lithium Ion Technology	
2000 Cycles @ 80% Discharge	
3,2kg/Battery	
FILTRATION	
Donaldson G082503 Filter	
Airflow Range of 4.0 - 8.0m ³ /min	
Includes Safety Element	
Temperature Tolerance of 83°C	
MAST	
8 metres @ Full Extension	
No Rotation Required	
No Folding Required	
1451,5kg Electric Winch with Safety Brake	
6mm Stainless Wire Rope 560kg Capacity	
Electric Pan and Tilt 24V 360° Rotation	
TRAILER	
2 x 16 Inch Wheels	
2500kg Capacity Single Braked Axle	
40mm Eye Coupler 2500kg Capacity	
Electric Trailer Mover 12V 2500kg Capacity	
2 x 2500kg Blade Leaf Springs	
1 x Heavy Duty Jockey Wheel	
4 x Parking Jacks 1000kg/Jack	
1 x 9kg Fire Extinguisher + Bracket	
Amber Strobe Light	
2 x Wheel Chock Blocks	
Flag Pole Holder	
Spare Tyre and Wheel	
VENTILATION	
Ebmpapst 4184 NXH DC Axial Compact Fan	
11 W Power Input	
237m ³ /h Air Flow	
57 dB Sound Pressure Level	
TOTAL TRAILER WEIGHT	
	1660kg



Stability & Safety

- Outriggers on the trailer ensure stability on uneven surfaces and during rough winds.
- The unit will include a module which integrates with the mine's collision avoidance system to warn heavy mobile equipment operators of its presence.
- The trailer is also fitted with a siren which sounds before and during the deployment and retraction functions of the solar panels and the mast.

Support

- The Solar Powered Mobile Lighting Plant is manufactured according to mining specifications.
- The completed product includes operation and training manuals, standard operating procedures, maintenance manuals, on-site support and a 12 month warranty.

Mobility

- The lighting plant is assembled onto a trailer which can easily be hitched and towed by a LDV; allowing for easier manoeuvrability across a range of environments as compared to larger vehicles.

Autonomous Operation

- Remote control positioning of the trailer after it has been removed from the LDV.
- This allows for optimal orientation of the solar panels in relation to the sun.
- A GSM unit is available to run diagnostics on the lighting plant; the results of which are then recorded and transmitted by the on-board PLC.
- The PLC provides central command and control of the unit; it relies on the receipt of system 'healthy' signals in order to operate.
- The PLC provides fully autonomous programming which will deploy and retract the mast and solar panels at desired intervals.
- User interface panel on the trailer allows for the operation of the lighting plant functions as well as to monitor its status.



Unit 2 Protea Business Park
30 All Black Road, Anderbolt, Boksburg, 1459, Gauteng

National Tel: 0861 723 000
International Tel: 010 060 9833
Fax: 0866 073 661

E-mail: sales@pandcmining.co.za
www.pandcmining.co.za