

**ALKASHAFA Camp Solar & Pump Sizing****Solar pumping project**

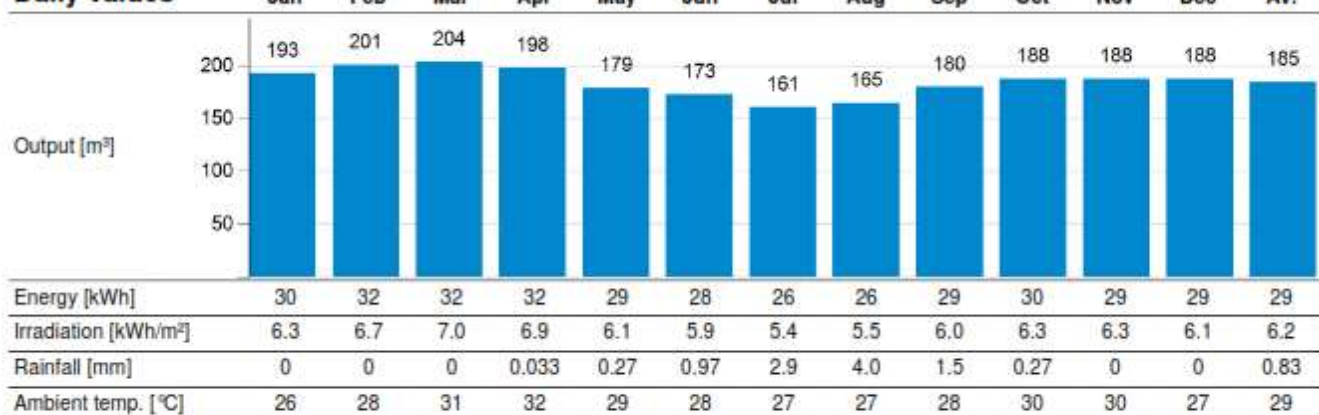
**Note:** For efficient operation and future upgrading, its recommended a new set of pump & PV module is installed.

**Parameter**

Location:	Sudan, Kosti (13° North; 32° East)	Water temperature:	25 °C	Altitude	855 m
Required daily output:	275 m <sup>3</sup> ; Sizing for August	Dirt loss:	5.0 %	Motor cable:	35 m
Pipe type (Discharge side):	steel, weldless, new comm. size galvanized: 0.160 mm	Pressure head:	18 m	Pipe length (Discharge side):	830 m
Pipe type (Suction side):	steel, weldless, new comm. size galvanized: 0.160 mm	Suction head:	3 m	Pipe length (Suction side):	5.0 m

**Products****Quantity Details**

PSk2-9 CS-F42-20	1 pc.	Surface pump system including controller with DataModule, motor and pump end
LC330-P72	17 pc.	5,610 Wp; 17 x 1 modules; 15 ° tilted
Motor cable	35 m	2.5 mm <sup>2</sup> 3-phase cable for power and 1-phase cable for ground
Pipeline (Discharge side)	830 m	100 mm (inner diameter) Pipeline
Pipeline (Suction side)	5.0 m	80 mm (inner diameter) Pipeline
Accessories	1 set	Water Sensor, Float Switch, PV Disconnect 1000-40-5, PV Protect 1000-125, SmartPSuk2, SmartStart, Surge Protector2

**SunSwitch setting in PumpScanner****min. 300 W/m<sup>2</sup>****Daily output in August****165 m<sup>3</sup>****Daily values****Hourly values**