

Design parameters for solar powered pumping system in Alhial Aljadeeda (Kajank)–Dilling Locality- South Kordofan State ()

The solar powered pumping systems planned to be installed according to the following specification and requirements:

Borehole Parameters	<u>Kajank</u>
Coordinates	N 12 ° 2' 46.7880 " E 29° 37 ' 49.2240"
Elevation (m)	
Casing diameter (in)	4 inch
Borehole depth (m)	51 m
Tank elevation above ground	2.5 m
NO. of Beneficiaries	3,000

Pump Specifications “

Motor Power	1.25 HP
Phase	Single Phase
Bore Size	80 mm
Discharge Range	1.8-4.2 m ³ /h

- Max Head(ft): 60 m
- Max Flow(LpHr): 4000

Motor Specifications:

- Upper bracket: Cathaphoresis treated cast iron plus SS304 cover cap.
- Max. Immersion depth: 985 ft.
- Protection: IP68
- Nos. of start per hour: max 20 at regular intervals.
- Sand slinger and lip seal.
- Insulation: Class F
- Rated ambient temperature: 86°C with min.
- Cooling flow 0.08 m/s of water flow speed
- Standard installation position: vertical and horizontal