

95027330 SQF 2.5-2 50 Hz

Input - summary

Water volume (max): 10 m³/day
 Peak month: July
 Head: 50 m
 Sun tracking: No (fixed)
 Solar data location: Accra, Ghana (5.6N, 0.2W)
 Data source: U Lowell : GHA4A, type P

Products

Pump: SQF 2.5-2, 1 x 95027330
 Solar module: GF 80, 12 x 96616391
 Solar array support structure: Pole mount supp. structure 8 GF 70/80, 2 x 96529748
 Solar array support structure: Pole mount supp. structure 4 GF 70/80, 1 x 96529749
 Wire kit, array to control box: 1 x 91126024
 Wire kit, Interpanel: 1 x 91126023
 Switch box / control unit: CU 200, 1 x 96625360, IO 101, 1 x 96475074
 Level switch: Level switch (on/off), 1 x 00010748

Sizing results - summary

Typical performance at solar radiation 800 W/m²

Flow: 2.1 m³/h
 Friction loss: 3.8 m
 Total head: 53.8 m
 Total cable loss: 1.6 %

Water production, Peak flow and Price

Total water production per year: 5100 m³
 Avg. water production per day: 14 m³/day
 Average water production per watt per day: 14.55 l/Wp/day
 Peak flow: 2.14 m³/h
 System price: On request

Cables and pipes:

Pump cable (pump - solar array)
 Length: 50 m
 Size: 2.5 mm²
 Pipe Length: 50 m
 Pipe diameter:

Solar module configuration:

Number of solar modules in series: 6, in parallel: 2
 Solar array rated power: 0.96 kWp
 Solar array rated volts: 199.8 V
 Sun tracking: No (fixed)

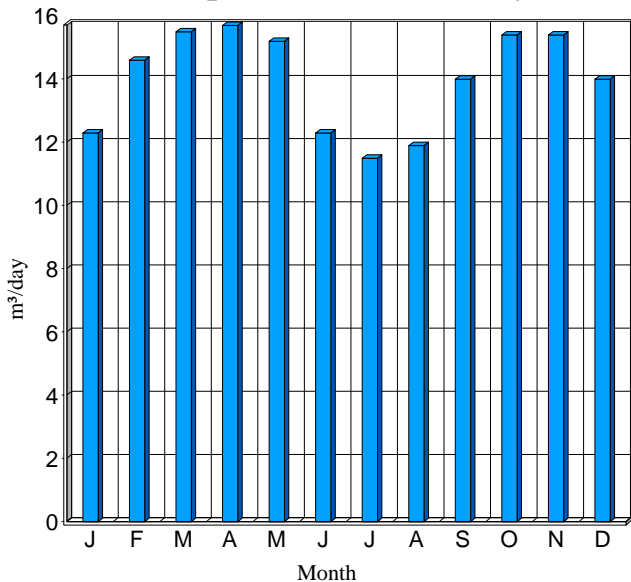
System performance - monthly average

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Water production [m ³ /day]	12	15	16	16	15	12	12	12	14	15	15	14
Energy production [kWh/day]	3.7	4.5	5.0	5.0	4.8	3.8	3.6	3.7	4.2	4.9	4.9	4.3
Radiation horizontal [kWh/m ² day]	4.2	5.1	5.6	5.8	5.6	4.5	4.2	4.3	4.9	5.5	5.3	4.7
Radiation tilt [kWh/m ² day]	7.8	8.0	7.4	6.5	5.6	4.3	4.1	4.5	5.9	8.2	9.3	8.6
Tilt angle [deg.]	5	5	5	5	5	5	5	5	5	5	5	5
Avg. Temp. [°C]	25	25	25	25	25	25	25	25	25	25	25	25
Temp. Variation [K]	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

AC power (backup) - water production

Required minimum output effect: 0.9 kW
 AC 115 V: Produces: 2.12 m³/h
 AC 230 V: Produces: 2.14 m³/h

Water production - monthly



Water production - daily: July

