

Tuesday, 26 April 2016

Progetto Pompa

Solar pumping project

Note: Piscina 12x5x2m
 Funzionamento tutto l'anno

Parameter

Location:	Italy, Rome (41° North; 12° East)	Swimming pool volume	75 m ³	Daily turnover rate	1 times
Required daily output:	75 m ³ ; Sizing for average month	Dirt loss:	5,0 %	Motor cable:	10 m
Pipe type:	plastic, drawn/pressed, new: 0,007 mm	System component losses:	7 m	Pipe length:	10 m

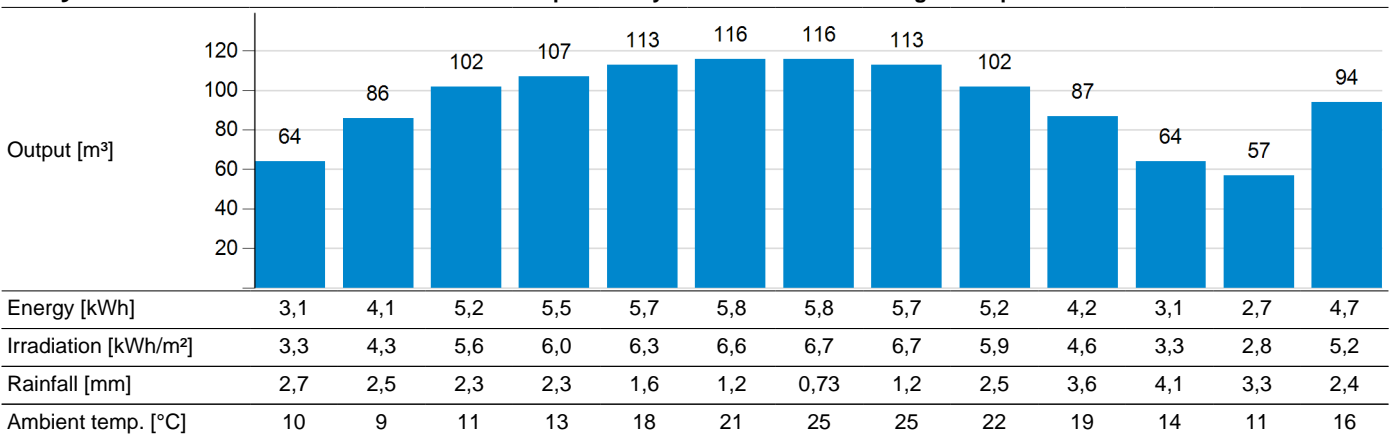
Products

Quantity	Details
PS600 Pool CS-17-1 -D	1 pc. Surface pump system including controller with DataModule, motor and pump end
LC250-P60	4 pc. 1.000 Wp; 2 x 2 modules; 41 ° tilted
Motor cable	10 m 4 mm ² 3-phase cable for power and 1-phase cable for ground
Pipeline	10 m 80 mm (inner diameter) Pipeline
CONNECTED products	1 set PS Communicator, LC20-12M for PS Communicator application, External Antenna for PS Communicator

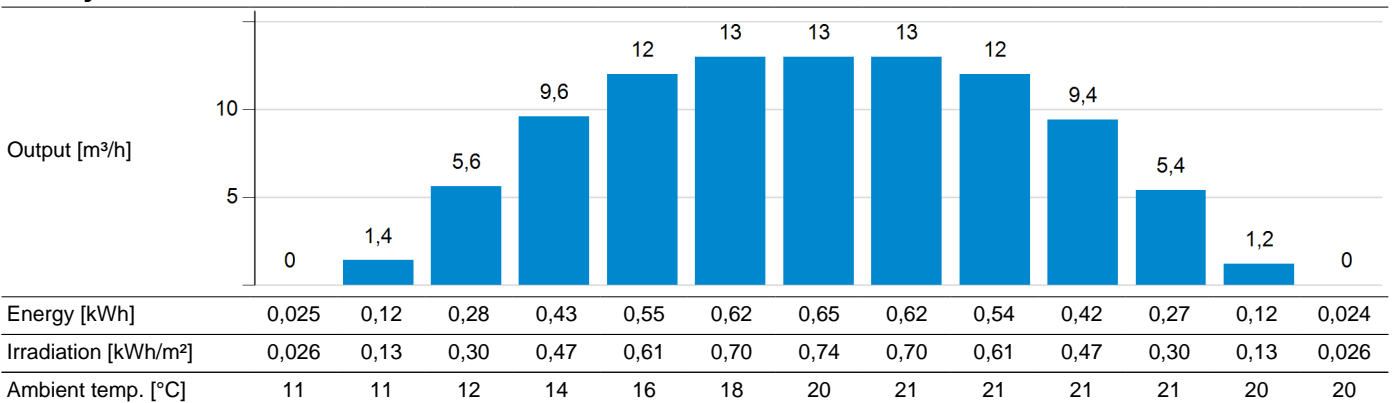
Daily output in average month

94 m³

Daily values



Hourly values

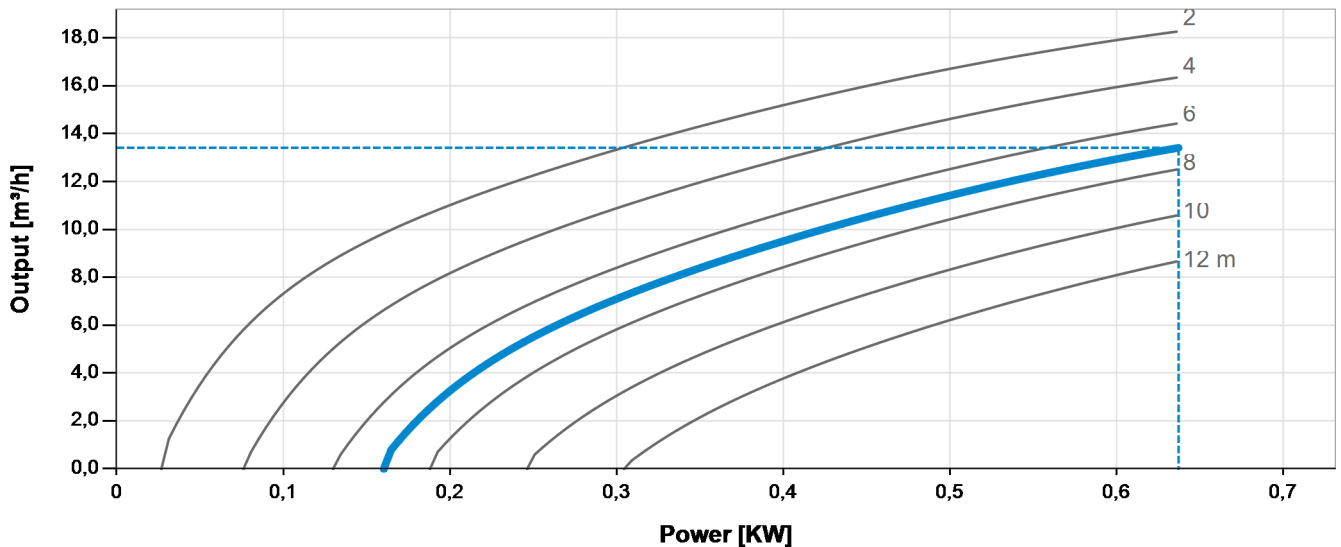


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System characteristic



		Min.	800 W/m ² , 20 °C	Max./STC*
PV generator	Cell temperature	[°C]	46	25
	Temperature loss	[%]	8,8	-
	Dirt loss	[%]	5,0	-
	Pmax	[Wp]	693	1.000
	Vmp	[V]	55	61
	Imp	[A]	13	16
	Voc	[V]	68	75
	Isc	[A]	14	18
	Pout	[W]	655	-
	Vout	[V]	59	-
	Iout	[A]	11	-
Motor cable	Power loss	[%]	1,1	2,0
				2,1
Pump systems	Motor power	[W]	161	637
	Motor voltage	[V EC]	36	53
	Motor current	[A]	4,5	12
	Motor speed	[rpm]	1.835	2.360
	Flow rate	[m ³ /h]	0	13
	Efficiency	[%]	0	40
Pipeline	Flow speed	[m/s]	0	0,74
	Friction loss	[m]	0,000	0,070

 *STC: Standard test conditions for photovoltaic modules, 1000 W/m² solar irradiance, 25 °C cell temperature