

February 21, 2013

## New project

Solar pumping project

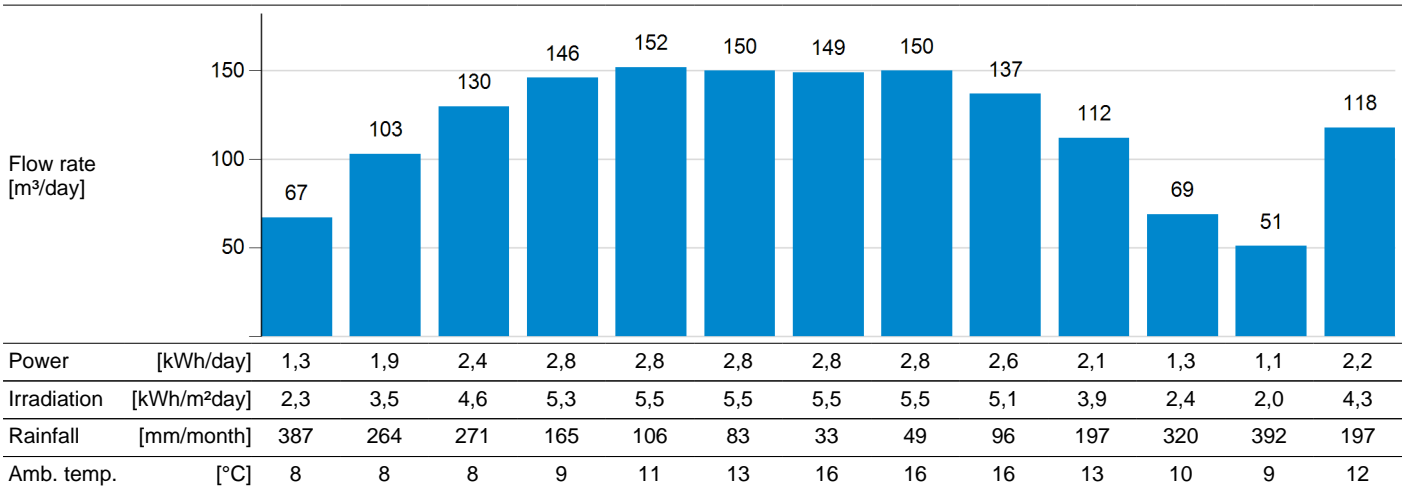
### Project data

Solar data:	Coos Bay (OR), United States (45°N; 125°W; 3,7	Static head:	2 m	Cable length:	7,0 m
Required daily flow:	90 m <sup>3</sup> /day in annual average	Dirt loss:	5,0 %	Pipe length:	-

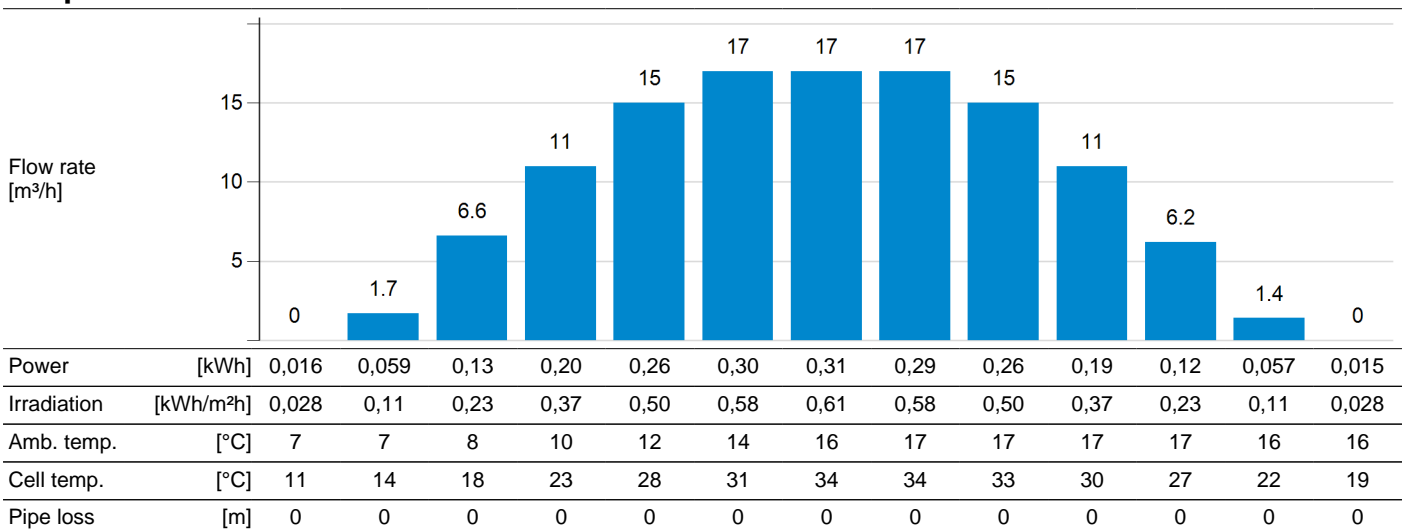
### Products

Quantity	Details	Item #
PS1800 CS-37-1	1 pc. Pump system incl. Controller, Motor, Pump end	2925
LC80-12M	7 pc. 560 Wp; 7 x 1 modules; 44 ° tilted fixed array	959
Motor cable	7,0 m 4mm <sup>2</sup> 3-phase cable	-

### Annual output



### Output in Av.

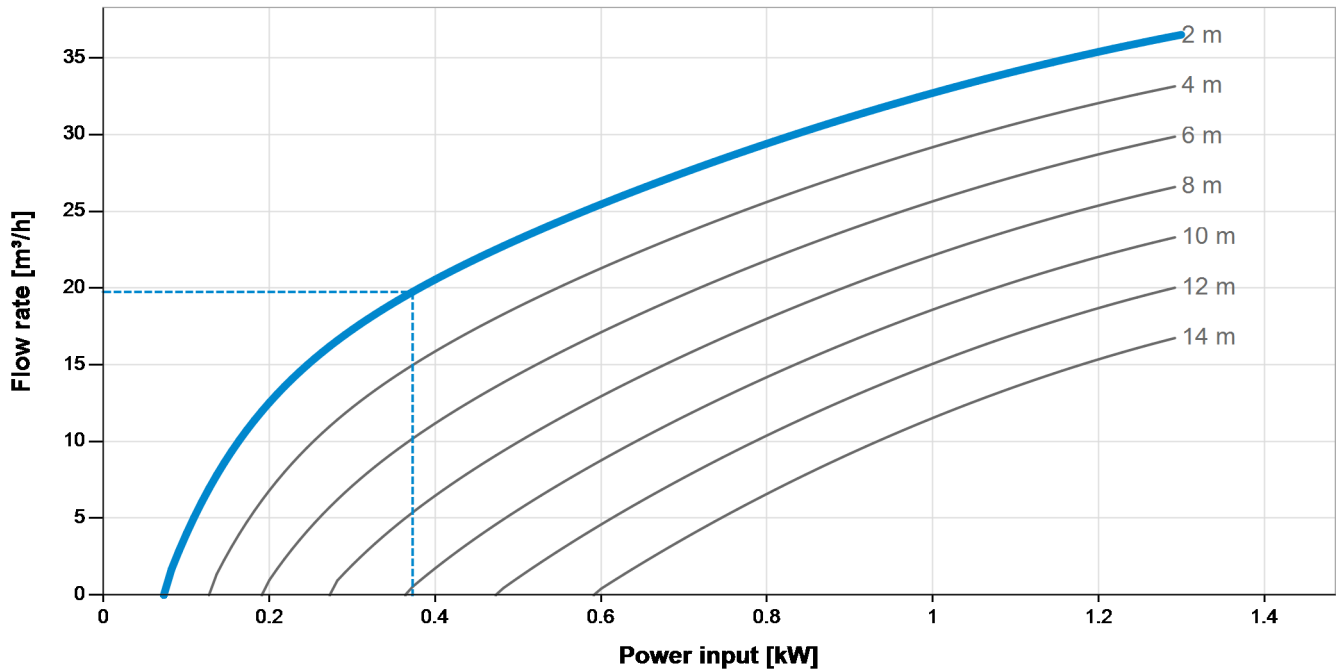


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### System performance



			Min.	at 800 W/m², 20 °C	Max./STC*
<b>PV generator</b>	Cell temperature	[°C]		46	25
	Power loss (temp)	[%]		11	-
	Dirt loss	[%]		5,0	-
	Pmax	[Wp]		381	560
	Vmp	[V]		107	120
	Imp	[A]		3,6	5
	Voc	[V]		143	157
	Isc	[A]		4,0	5
	Pout	[W]		381	-
	Vout	[V]		107	-
	Iout	[A]		3,6	-
<b>Motor cable</b>	Power loss (temp)	[%]	0,44	0,58	0,79
<b>Pump system</b>	Motor power	[W]	73	373	1.300
	Motor voltage	[V EC]	31	63	102
	Motor current	[A]	2,3	5,9	13
	Motor speed	[rpm]	1.240	1.780	2.825
	Flow rate	[m³/h]	0	20	37
	Efficiency	[%]	0	29	34

\*STC: Standard Test Conditions for Photovoltaic Modules, 1000 W/m² inplane irradiation, 25° C cell temperature