



Pump Unit ( Pu ) ( motor + pump end )	Dimensions					Shipping Dimensions			
	L	A	B	D	S	packaging	shipping volume	net weight	gross weight
	[mm]	[mm]	[mm]	[mm]		[mm]	[m³]	[kg]	[kg]
C-SJ5-8	593	408	185	100	G 1 1/2"	650X160X150	0,016	12	12,5
Controller Type									
PS150-C						320X240X160	0,0123	1,2	1,8

### Battery Sample Layout :

**Lift / water req.:** 50ft lift and 3000USG per day required

**Solar radiation:** 6kWh/m²/day say 6 peak sun hours

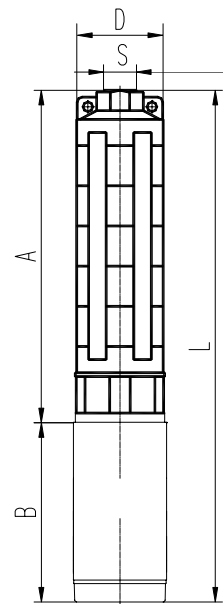
**Pump:** PS150 C-SJ5-8 pump, 3000G / (14,5x60)G/h = 3,5h pumping time

**Energy req.:** 3,5h X 24V X 12,5A = 1050Wh X 1,5\* = 1575Wh  
\*(const. factor for battery systems to account for battery, charging and array losses)

**Array size:** 1575Wh / 6 peak sun hour day (summer)  
= 265Wp array is needed

**Battery size:** 1575Wh / 24V = 65Ah X 2\* = 130Ah min. size  
\*(min. factor for batteries)

Choose a larger array and battery size to compensate bad weather periods.



Performance PS150 C-SJ5-8 Centrifugal Pump																					
Lift		12V Battery or 65Wp Solar direct					17V or 150Wp Solar direct					24V Battery or 300Wp Solar direct, current = 12,5A				450Wp Solar direct		Lift			
		Current	Flow Rate / min	5hrs solar day			Current	Flow Rate / min	5hrs solar day			Flow Rate / min	5hrs solar day			5hrs solar day					
Ft	m	A	L	US G	m³	USG	A	L	US G	m³	USG	L	US G	m³	USG	m³	USG	m³	USG	Ft	m
6,6	2	5,2	40	10,6	12	3.200	8	64	16,9	19,3	5.100	82	21,7	24,6	6.500	37	9.750	37	9.750	6,6	2
10	3	5,3	36	9,5	11	2.900	8	61	16,1	18,2	4.800	79	20,9	23,8	6.300	36	9.450	36	9.450	10	3
13	4	5,4	32	8,5	9	2.500	8,2	59	15,6	17,8	4.700	77	20,3	23,1	6.100	35	9.150	35	9.150	13	4
16	5	5,3	26	6,9	8	2.100	8,4	57	15,1	17,0	4.500	75	19,8	22,3	5.900	33	8.850	33	8.850	16	5
20	6	5,1	24	6,3	7	1.900	8,5	56	14,8	16,7	4.400	73	19,3	22,0	5.800	33	8.700	33	8.700	20	6
23	7	4,3	13	3,4	4	1.000	8,6	53	14,0	15,9	4.200	70	18,5	20,8	5.500	31	8.250	31	8.250	23	7
26	8						8,7	50	13,2	15,1	4.000	68	18,0	20,4	5.400	31	8.100	31	8.100	26	8
30	9						8,8	46	12,2	13,6	3.600	67	17,7	20,1	5.300	30	7.950	30	7.950	30	9
33	10						8,6	44	11,6	13,2	3.500	65	17,2	19,7	5.200	30	7.800	30	7.800	33	10
40	12						8,5	37	9,8	11,0	2.900	60	15,9	18,2	4.800	27	7.200	27	7.200	40	12
50	14						8,4	26	6,9	7,9	2.100	55	14,5	16,7	4.400	25	6.600	25	6.600	50	14
												50	13,2	15,1	4.000	23	6.000	23	6.000	53	16
												42	11,1	12,5	3.300	19	4.950	19	4.950	66	20
												34	9,0	10,2	2.700	12	3.200	12	3.200	73	22

Note: a solar tracker will improve daily output in summer by 40 to 50%

Note: Solar modules have less output due to high temperature, dirt, manufactures tolerances etc.

Choose a 20-30% larger array to compensate these effects.

### Wire sizing Table Controller to Pump Motor

Feet max. length	Meters	Pump Watts - wire size mm² / AWG		
		70W / 12V	150W / 17V	300W / 24V -30V
17	5	2,5 / #14	2,5 / #14	2,5 / #14
33	10	2,5 / #10	4 / #10	4 / #10
50	15	4 / #10	4 / #10	4 / #10
65	20	4 / #10	6 / #10	6 / #10
80	25	6 / #10	6 / #10	6 / #8

wire sizing layout for max. 6% cable loss

Available From:

**Solar Power & Pump Co.**  
Elk City, OK  
580-225-1704  
1-866-246-7652

