

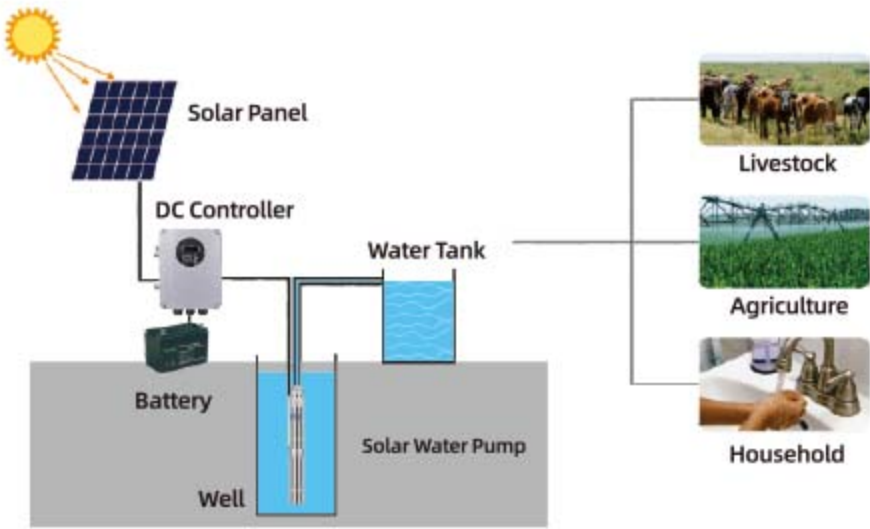
SOLAR WATER PUMPS

SOLAR WATER PUMPS

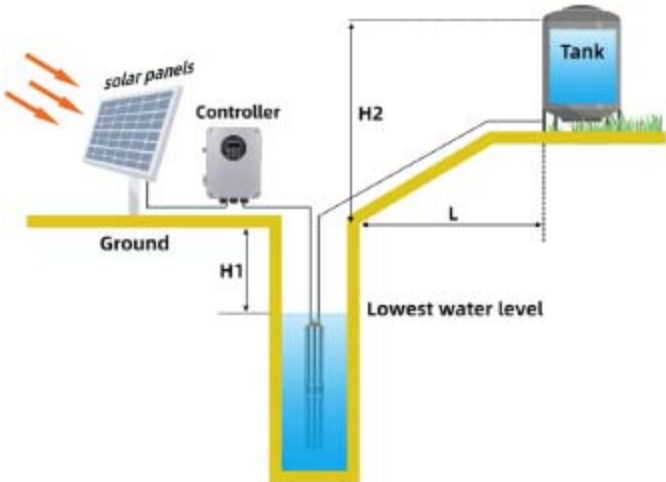
A DC solar pumping system captures sunlight using solar panels, converting it into direct current(DC)electricity. This DC power then drives a pump, equipped with a brushless motor for efficiency. A controller monitors and optimizes the pump's performance based on the available solar energy, ensuring consistent water flow even under varying sunlight conditions.

Controller Unit

- Waterproof Rating:** IP65 ensures resilience against moisture.
- Temperature Tolerance:** Operates effectively between -15°C to 60°C.
- Efficient Energy Use:** Integrated MPPT maximizes solar energy utilization.
- Comprehensive Display:** Monitors power, voltage, current, speed, and other operational metrics.
- Automated Operation:** Controller manages start/stop cycles, allowing 24/7 operation without manual oversight.
- Adaptive Speed Control:** Auto-adjusts to sunlight intensity and offers manual speed modification for customized needs.
- Soft Start Feature:** Eliminates surge currents, safeguarding the pump motor.
- Advanced Protections:** Shields against over/under voltage, excessive current, phase anomalies, short circuits, water scarcity, and high temperatures.

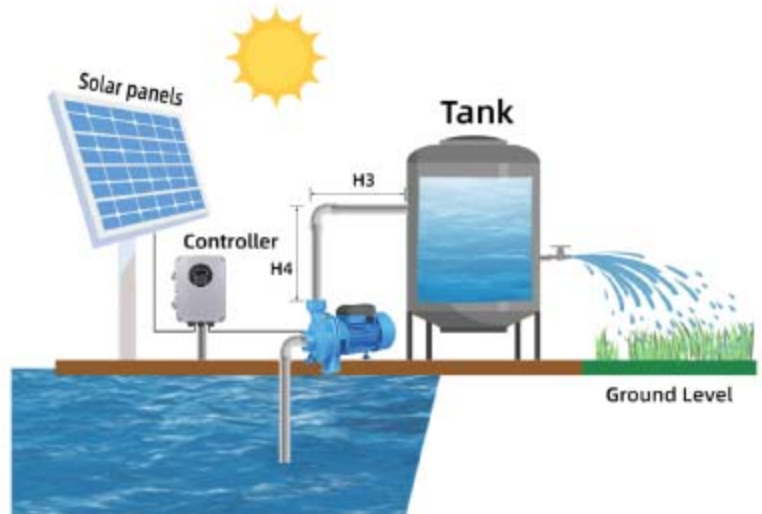


How to select the right pump



How to calculate lift (deep well pump)?

- H1(Lift from lowest water level to ground):mt
- H2 (Tank height and additional lift if available) :mt
- L (Horizontal distance of water delivery):mt
- Rated head >H1+H2+10%L



How to calculate Total Head (surface water):

- H3 the horizontal distance from the water source to the water tank
- H4 vertical height from water source to water tank
- Rated head=10%H3+H4

Formula to calculate the solar panels



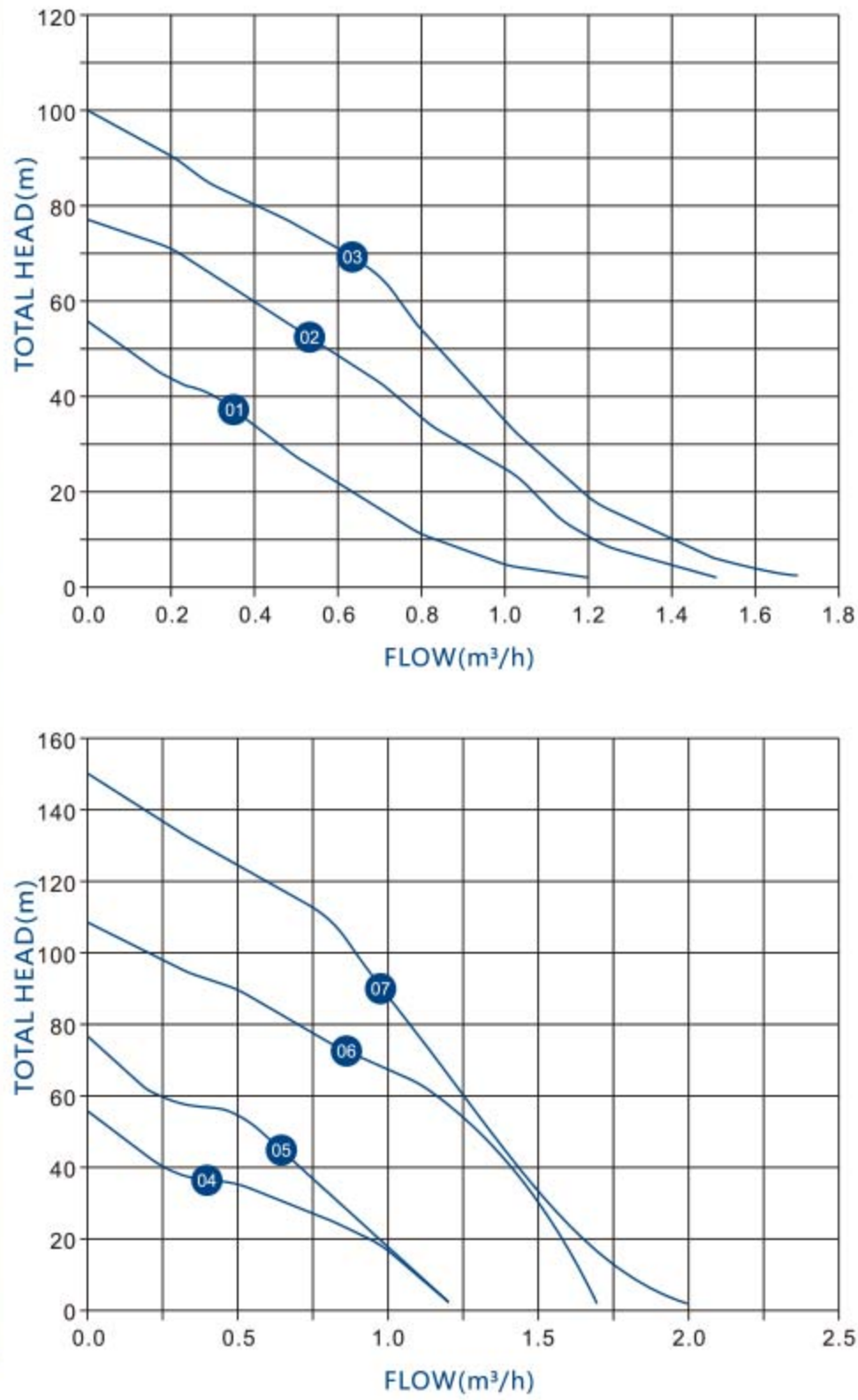
- The power of the solar photovoltaic panel array is recommended to be 1.3 times or more than the power of the water pump. The voltage of the solar photovoltaic panel array needs to meet the voltage range of the water pump.
- Step 1:** Pump power x 1.3 ÷ solar panels' power = Min. QTY of solar panels (Min. QTY of solar panels ensures sufficient power supply)
 - Step 2:** Max. voltage of controller ÷ Voc of solar panels =Max. QTY of Solar panels in line (A Max. QTY of series-connected solar panels is limited by voltage protection to prevent controller damage.)
 - Step 3:** QTY of Solar panels * Vmp > min. Mppt voltage of control box (An appropriate number of solar panels ensures high pump efficiency and cost-effectiveness.)
 - Step 4:** Prioritize series connection before parallel connection to determine the optimal solar panel configuration.

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PERFORMANCE CURVES



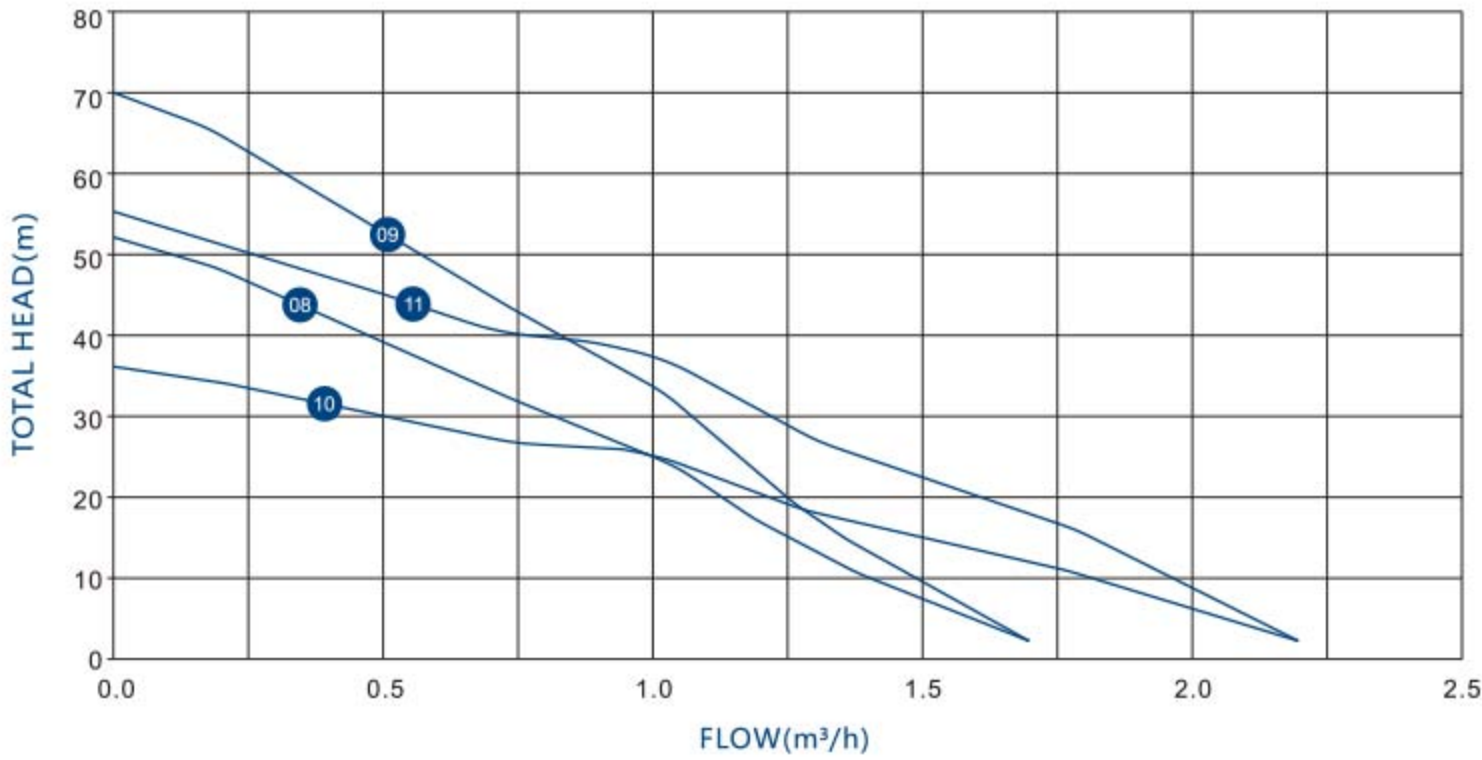
TECHNICAL DATA

NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
1	2SS1.2-56-24-120	0.12	0.16	1.2m³/h	56m	0.75"	1.5m	580W*1
2	2SS1.5-77-24-210	0.21	0.28	1.5m³/h	75m	0.75"	1.5m	580W*1
3	2SS1.7-100-48-500	0.5	0.67	1.7m³/h	100m	0.75"	1.5m	580W*2

NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
4	3SS1.2-56-24-120	0.12	0.16	1.2m³/h	56m	0.75"	2m	580W*1
5	3SS1.2-77-24-210	0.21	0.28	1.2m³/h	77m	0.75"	2m	580W*1
6	3SS1.7-109-48-500	0.5	0.67	1.7m³/h	109m	0.75"	2m	580W*2
7	3SS2.0-150-72-750	0.75	1	2m³/h	150m	0.75"	2m	580W*2



MODEL DEFINITION

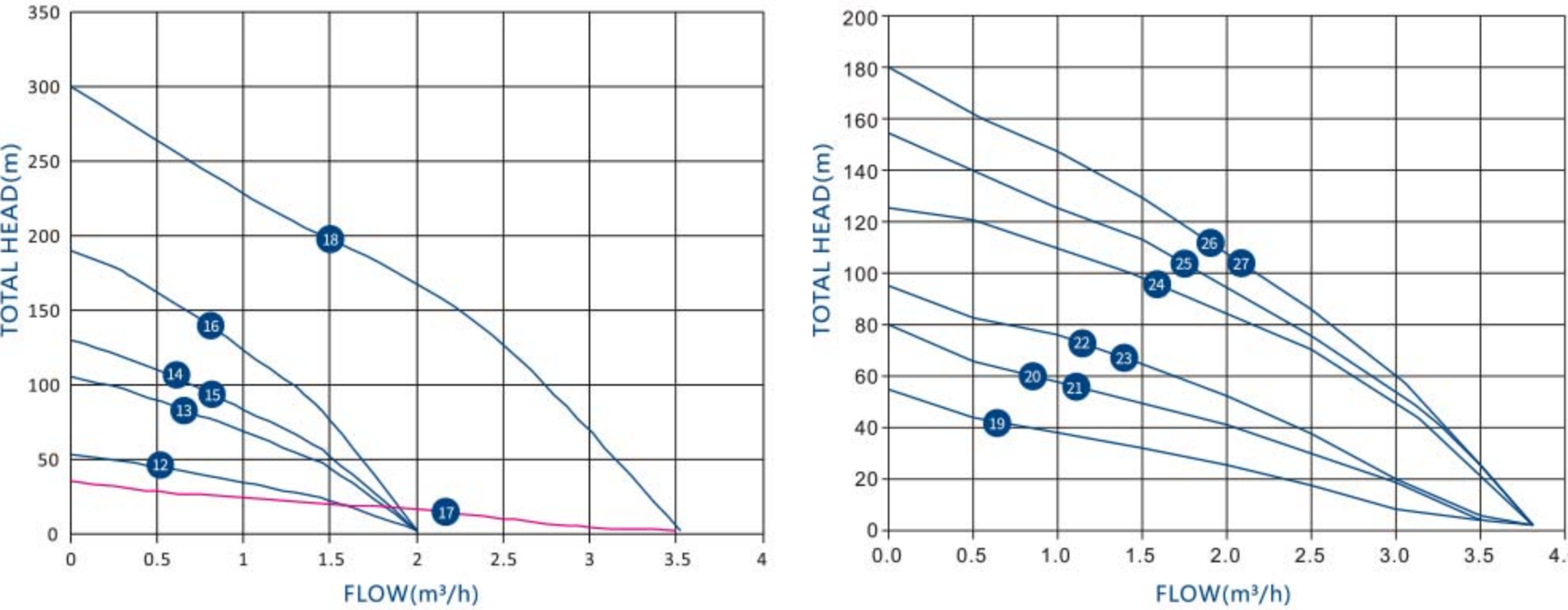


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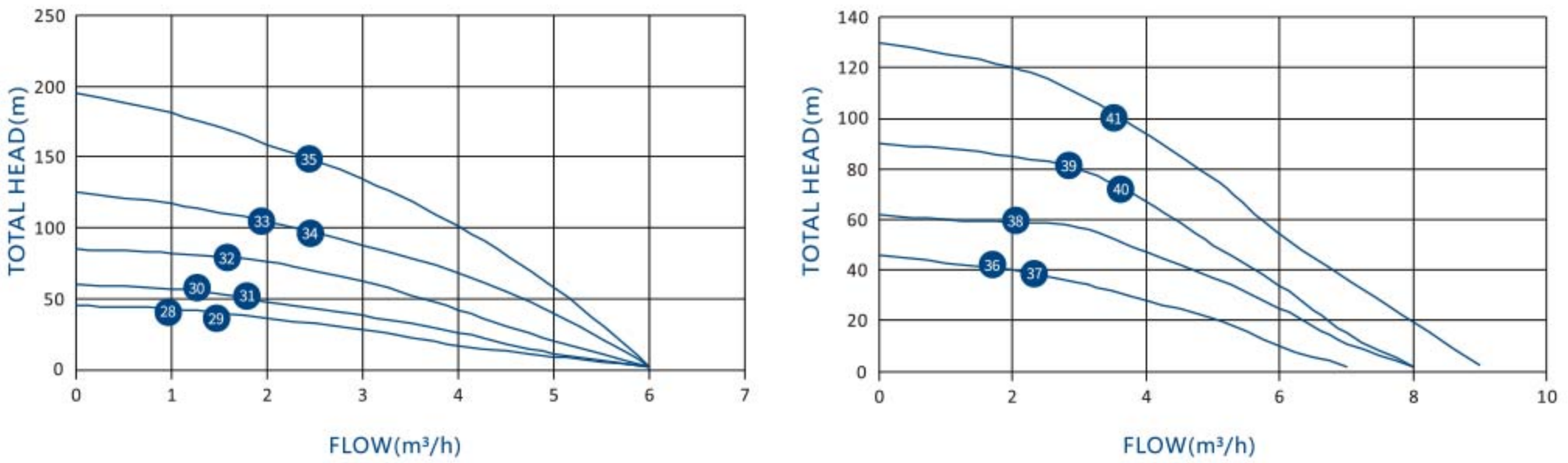
NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
8	2SC1.7-52-24-300	0.3	0.4	1.7m³/h	52m	0.75"	1.5m	580W*1
9	2SC1.7-70-48-400	0.4	0.55	1.7m³/h	70m	0.75"	1.5m	580W*2
10	2SC2.2-36-24-300	0.3	0.4	2.2m³/h	36m	0.75"	1.5m	580W*1
11	2SC2.2-55-48-400	0.4	0.55	2.2m³/h	55m	0.75"	1.5m	580W*2



PERFORMANCE CURVES



PERFORMANCE CURVES

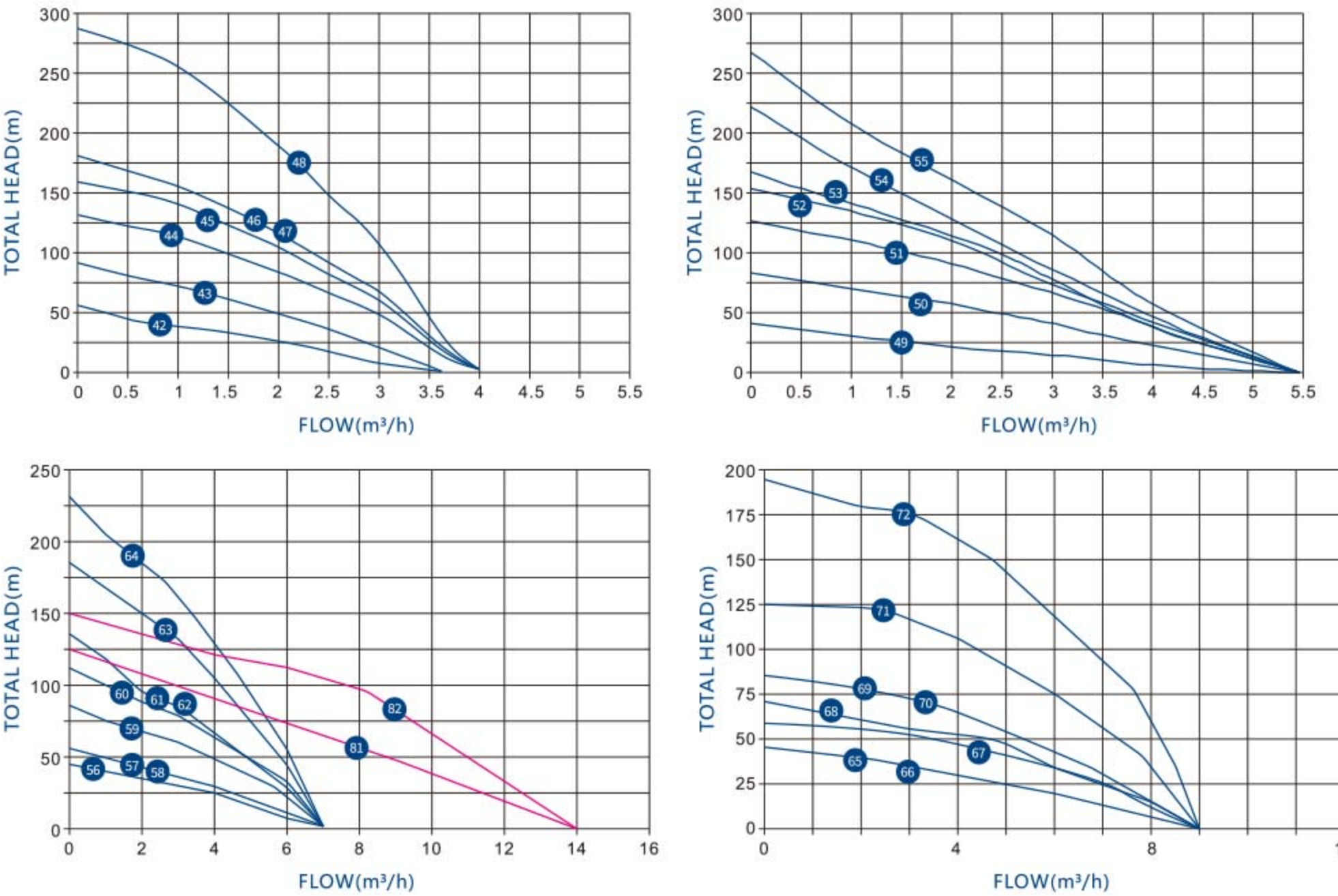


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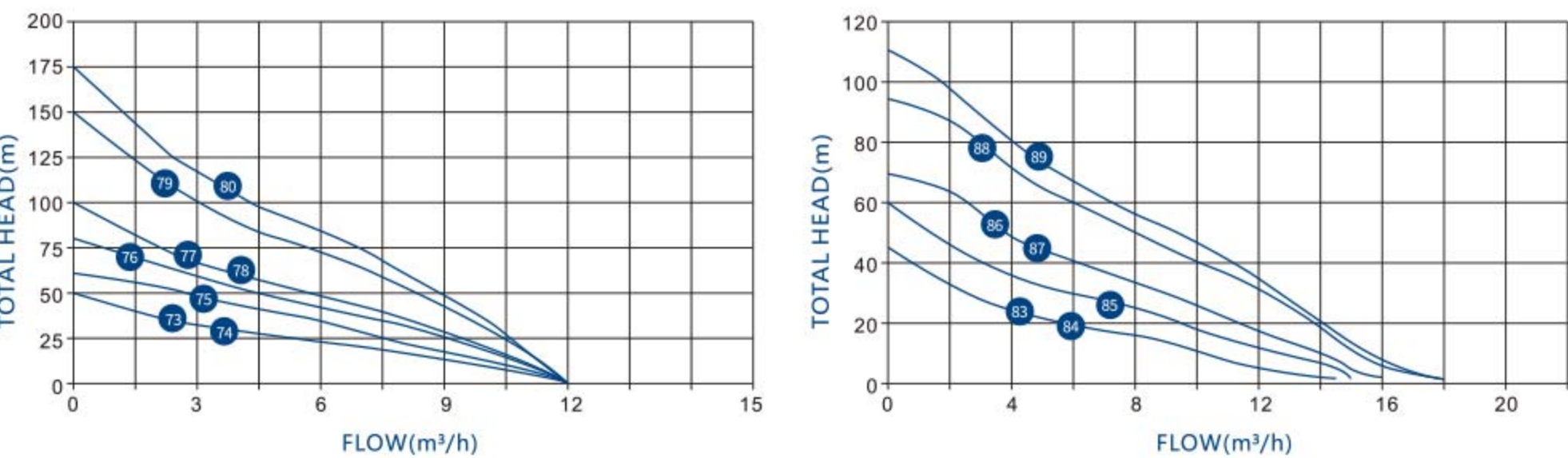
NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
12	3SC2-53-24-300	0.3	0.4	2m³/h	53m	1.25"	2m	580W*1
13	3SC2-105-48-600	0.6	0.8	2m³/h	105m	1.25"	2m	580W*2
14	3SC2-130-48-750	0.75	1	2m³/h	130m	1.25"	2m	580W*2
15	3SC2-130-72-750	0.75	1	2m³/h	130m	1.25"	2m	580W*2
16	3SC2-190-110-1100	1.1	1.5	2m³/h	190m	1.25"	2m	580W*3
17	3SC3.5-35-24-300	0.3	0.4	3.5m³/h	35m	1.25"	2m	580W*1
18	3SC3.5-300-220-2200-HV	2.2	3	3.5m³/h	300m	1.25"	2m	580W*6
19	3SC3.8-55-48-400	0.4	0.55	3.8m³/h	55m	1.25"	2m	580W*2
20	3SC3.8-80-48-600	0.6	0.8	3.8m³/h	80m	1.25"	2m	580W*2
21	3SC3.8-80-72-600	0.6	0.8	3.8m³/h	80m	1.25"	2m	580W*2
22	3SC3.8-95-48-750	0.75	1	3.8m³/h	95m	1.25"	2m	580W*2
23	3SC3.8-95-72-750	0.75	1	3.8m³/h	95m	1.25"	2m	580W*2
24	3SC3.8-125-110-1100	1.1	1.5	3.8m³/h	125m	1.25"	2m	580W*3
25	3SC3.8-155-110-1300	1.3	1.75	3.8m³/h	155m	1.25"	2m	580W*3
26	3SC3.8-180-110-1500	1.5	2	3.8m³/h	180m	1.25"	2m	580W*4
27	3SC3.8-180-180-1500-HV	1.5	2	3.8m³/h	180m	1.25"	2m	580W*4
28	3SC6-45-48-600	0.6	0.8	6.0m³/h	45m	1.25"/1.5"	2m	580W*2
29	3SC6-45-72-600	0.6	0.8	6.0m³/h	45m	1.25"/1.5"	2m	580W*2
30	3SC6-60-48-750	0.75	1	6.0m³/h	60m	1.25"/1.5"	2m	580W*2
31	3SC6-60-72-750	0.75	1	6.0m³/h	60m	1.25"/1.5"	2m	580W*2
32	3SC6-85-110-1100	1.1	1.5	6.0m³/h	85m	1.25"/1.5"	2m	580W*3
33	3SC6-125-110-1500	1.5	2	6.0m³/h	125m	1.25"/1.5"	2m	580W*4
34	3SC6-125-180-1500-HV	1.5	2	6.0m³/h	125m	1.25"/1.5"	2m	580W*4
35	3SC6-195-220-2200-HV	2.2	3	6.0m³/h	195m	1.25"/1.5"	2m	580W*6
36	3SC7-46-48-750	0.75	1	7.0m³/h	46m	1.25"/1.5"	2m	580W*2
37	3SC7-46-72-750	0.75	1	7.0m³/h	46m	1.25"/1.5"	2m	580W*2
38	3SC8-62-110-1100	1.1	1.5	8.0m³/h	62m	1.25"/1.5"	2m	580W*3
39	3SC8-90-110-1500	1.5	2	8.0m³/h	90m	1.25"/1.5"	2m	580W*4
40	3SC8-90-180-1500-HV	1.5	2	8.0m³/h	90m	1.25"/1.5"	2m	580W*4
41	3SC9-130-220-2200-HV	2.2	3	9.0m³/h	130m	1.25"/1.5"	2m	580W*6



PERFORMANCE CURVES



PERFORMANCE CURVES

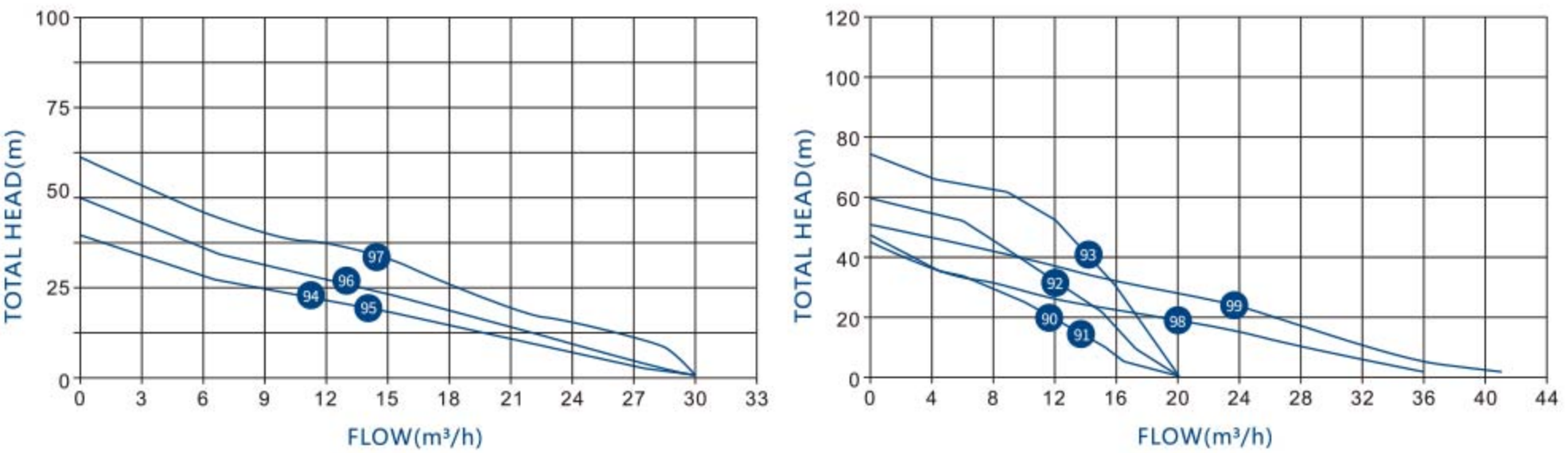


TECHNICAL DATA

NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
42	4SC3.6-55-48-500	0.5	0.7	3.6m³/h	55m	1.25"	2m	580W*2
43	4SC3.6-88-72-750	0.75	1	3.6m³/h	88m	1.25"	2m	580W*2
44	4SC4-130-110-1100	1.1	1.5	4.0m³/h	130m	1.25"	2m	580W*3
45	4SC4-160-110-1300	1.3	1.75	4.0m³/h	160m	1.25"	2m	580W*3
46	4SC4-180-110-1500	1.5	2	4.0m³/h	180m	1.25"	2m	580W*4
47	4SC4-180-180-1500-HV	1.5	2	4.0m³/h	180m	1.25"	2m	580W*4
48	4SC4-288-220-2200-HV	2.2	3	4.0m³/h	288m	1.25"	2m	580W*6
49	4SC5.5-42-48-400	0.4	0.55	5.5m³/h	42m	1.25"	2m	580W*2
50	4SC5.5-83-72-800	0.8	1.07	5.5m³/h	83m	1.25"	2m	580W*2
51	4SC5.5-125-110-1100	1.1	1.5	5.5m³/h	125m	1.25"	2m	580W*3
52	4SC5.5-152-110-1300	1.3	1.75	5.5m³/h	152m	1.25"	2m	580W*3
53	4SC5.5-165-110-1500	1.5	2	5.5m³/h	165m	1.25"	2m	580W*4
54	4SC5.5-221-220-2200-HV	2.2	3	5.5m³/h	221m	1.25"	2m	580W*6
55	4SC5.5-262-280-3000-HV	3	4	5.5m³/h	262m	1.25"	2m	580W*7
56	4SC7-45-48-600	0.6	0.8	7.0m³/h	45m	1.25"/1.5"	2m	580W*2
57	4SC7-56-48-750	0.75	1	7.0m³/h	56m	1.25"/1.5"	2m	580W*2
58	4SC7-56-72-750	0.75	1	7.0m³/h	56m	1.25"/1.5"	2m	580W*2
59	4SC7-86-110-1100	1.1	1.5	7.0m³/h	86m	1.25"/1.5"	2m	580W*3
60	4SC7-112-110-1300	1.3	1.75	7.0m³/h	112m	1.25"/1.5"	2m	580W*3
61	4SC7-135-110-1500	1.5	2	7.0m³/h	135m	1.25"/1.5"	2m	580W*4
62	4SC7-135-180-1500-HV	1.5	2	7.0m³/h	135m	1.25"/1.5"	2m	580W*4
63	4SC7-185-220-2200-HV	2.2	3	7.0m³/h	185m	1.25"/1.5"	2m	580W*6
64	4SC7-230-280-3000-HV	3	4	7.0m³/h	230m	1.25"/1.5"	2m	580W*7
65	4SC9-45-48-750	0.75	1	9.0m³/h	45m	1.5"/2"	2m	580W*2
66	4SC9-45-72-750	0.75	1	9.0m³/h	45m	1.5"/2"	2m	580W*2
67	4SC9-58-110-1100	1.1	1.5	9.0m³/h	58m	1.5"/2"	2m	580W*3
68	4SC9-71-110-1300	1.3	1.75	9.0m³/h	71m	1.5"/2"	2m	580W*3
69	4SC9-85-110-1500	1.5	2	9.0m³/h	85m	1.5"/2"	2m	580W*4
70	4SC9-85-180-1500-HV	1.5	2	9.0m³/h	85m	1.5"/2"	2m	580W*4
71	4SC9-125-220-2200-HV	2.2	3	9.0m³/h	125m	1.5"/2"	2m	580W*6
72	4SC9-195-280-3000-HV	3	4	9.0m³/h	195m	1.5"/2"	2m	580W*7
73	4SC12-50-48-750	0.75	1	12m³/h	50m	2"	2m	580W*2
74	4SC12-50-72-750	0.75	1	12m³/h	50m	2"	2m	580W*2
75	4SC12-60-110-1100	1.1	1.5	12m³/h	60m	2"	2m	580W*3
76	4SC12-80-110-1300	1.3	1.75	12m³/h	80m	2"	2m	580W*3
77	4SC12-100-110-1500	1.5	2	12m³/h	100m	2"	2m	580W*4
78	4SC12-100-180-1500-HV	1.5	2	12m³/h	100m	2"	2m	580W*4
79	4SC12-150-220-2200-HV	2.2	3	12m³/h	150m	2"	2m	580W*6
80	4SC12-175-280-3000-HV	3	4	12m³/h	175m	2"	2m	580W*7
81	4SC14-125-220-2200-HV	2.2	3	14m³/h	125m	2"	2m	580W*6
82	4SC14-150-280-3000-HV	3	4	14m³/h	150m	2"	2m	580W*7
83	4SC15-45-48-750	0.75	1	15m³/h	45m	2"	2m	580W*2
84	4SC15-45-72-750	0.75	1	15m³/h	45m	2"	2m	580W*2
85	4SC15-60-110-1100	1.1	1.5	15m³/h	60m	2"	2m	580W*3
86	4SC16-70-110-1500	1.5	2	16m³/h	70m	2"	2m	580W*4
87	4SC16-70-180-1500-HV	1.5	2	16m³/h	70m	2"	2m	580W*4
88	4SC18-95-220-2200-HV	2.2	3	18m³/h	95m	2"	2m	580W*6
89	4SC18-112-280-3000-HV	3	4	18m³/h	112m	2"	2m	580W*7



PERFORMANCE CURVES

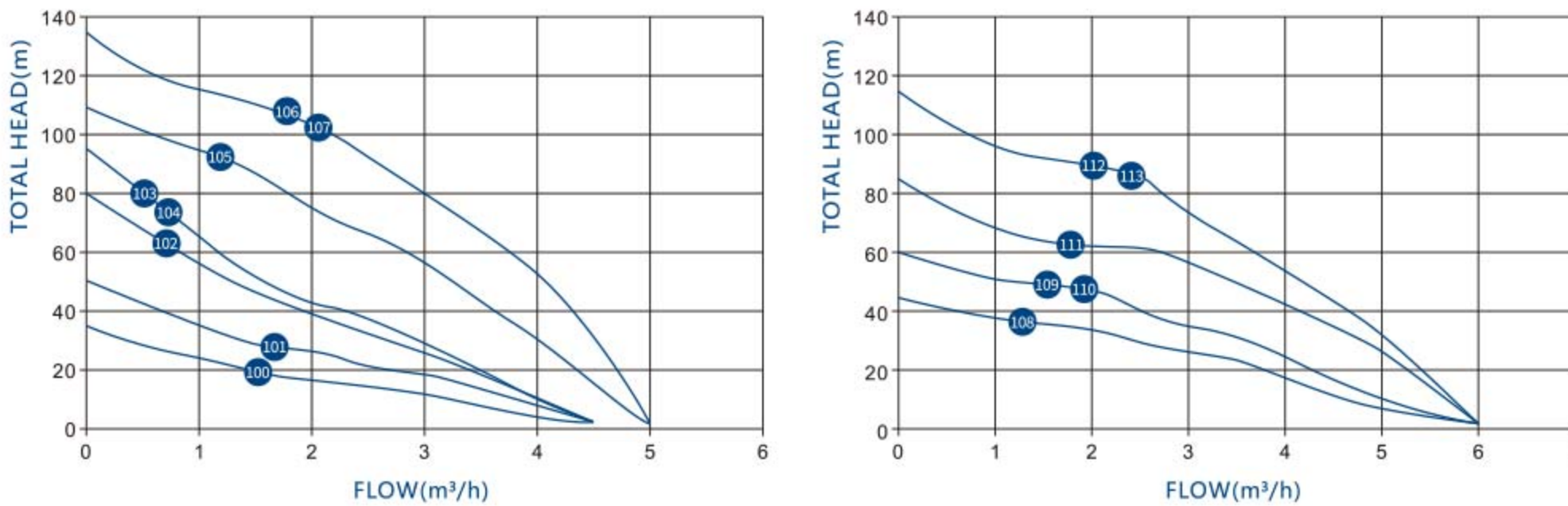


TECHNICAL DATA

NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
90	4SC20-48-110-1500	1.5	2	20m³/h	48m	2"	2m	580W*4
91	4SC20-48-180-1500-HV	1.5	2	20m³/h	48m	2"	2m	580W*4
92	4SC20-60-220-2200-HV	2.2	3	20m³/h	60m	2"	2m	580W*6
93	4SC20-75-280-3000-HV	3	4	20m³/h	75m	2"	2m	580W*7
94	4SC30-40-110-1500	1.5	2	30m³/h	40m	2"	2m	580W*4
95	4SC30-40-180-1500-HV	1.5	2	30m³/h	40m	2"	2m	580W*4
96	4SC30-50-220-2200-HV	2.2	3	30m³/h	50m	2"	2m	580W*6
97	4SC30-60-280-3000-HV	3	4	30m³/h	60m	2"	2m	580W*7
98	4SC36-45-220-2200-HV	2.2	3	36m³/h	45m	3"	2m	580W*6
99	4SC41-52-280-3000-HV	3	4	41m³/h	52m	3"	2m	580W*7



PERFORMANCE CURVES

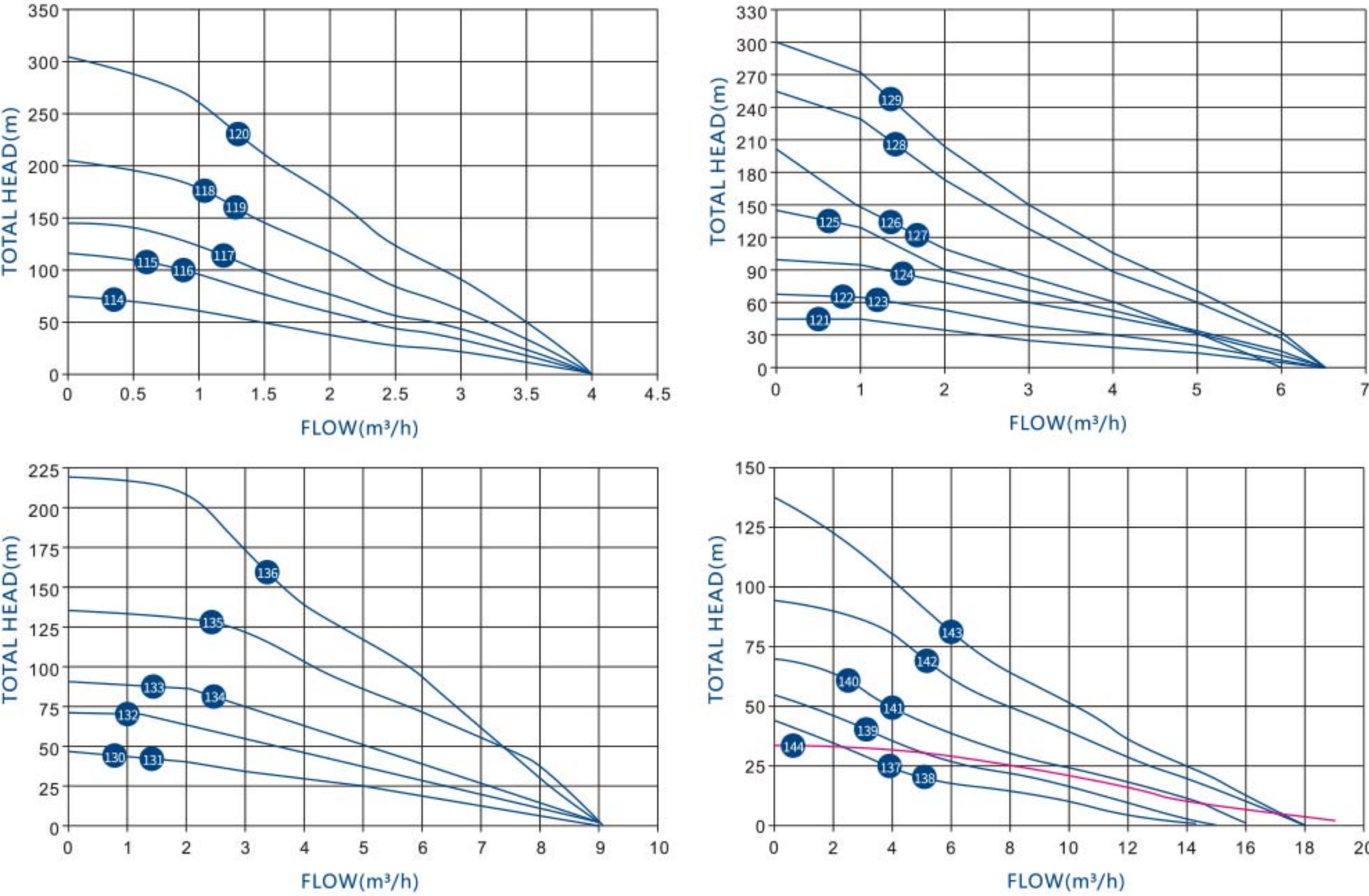


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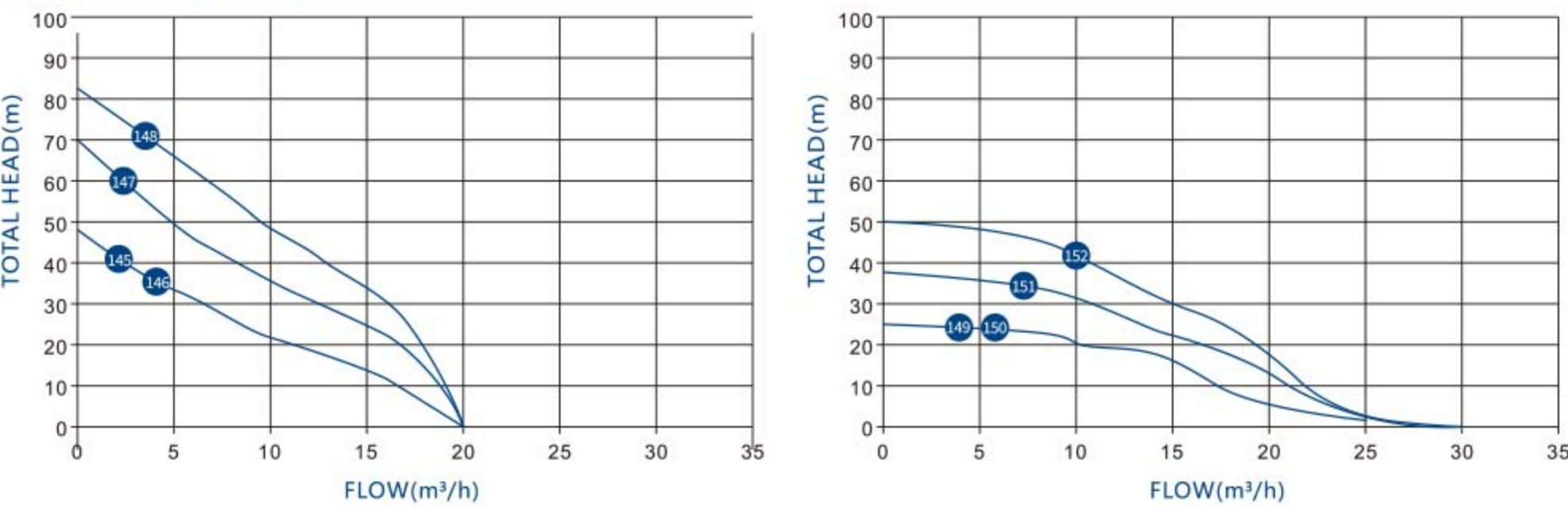
NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
100	3SSC4.5-35-24-300	0.3	0.4	4.5m³/h	35m	1.25"	2m	580W*1
101	3SSC4.5-50-48-400	0.4	0.55	4.5m³/h	50m	1.25"	2m	580W*2
102	3SSC4.5-80-48-600	0.6	0.8	4.5m³/h	80m	1.25"	2m	580W*2
103	3SSC4.5-95-48-750	0.75	1	4.5m³/h	95m	1.25"	2m	580W*2
104	3SSC4.5-95-72-750	0.75	1	4.5m³/h	95m	1.25"	2m	580W*2
105	3SSC5-110-110-1100	1.1	1.5	5.0m³/h	110m	1.25"	2m	580W*3
106	3SSC5-135-110-1500	1.5	2	5.0m³/h	135m	1.25"	2m	580W*4
107	3SSC5-135-180-1500-HV	1.5	2	5.0m³/h	135m	1.25"	2m	580W*4
108	3SSC6-44-48-600	0.6	0.8	6.0m³/h	44m	1.25"	2m	580W*2
109	3SSC6-60-48-750	0.75	1	6.0m³/h	60m	1.25"	2m	580W*2
110	3SSC6-60-72-750	0.75	1	6.0m³/h	60m	1.25"	2m	580W*2
111	3SSC6-85-110-1100	1.1	1.5	6.0m³/h	85m	1.25"	2m	580W*3
112	3SSC6-115-110-1500	1.5	2	6.0m³/h	115m	1.25"	2m	580W*4
113	3SSC6-115-180-1500-HV	1.5	2	6.0m³/h	115m	1.25"	2m	580W*4



PERFORMANCE CURVES



PERFORMANCE CURVES

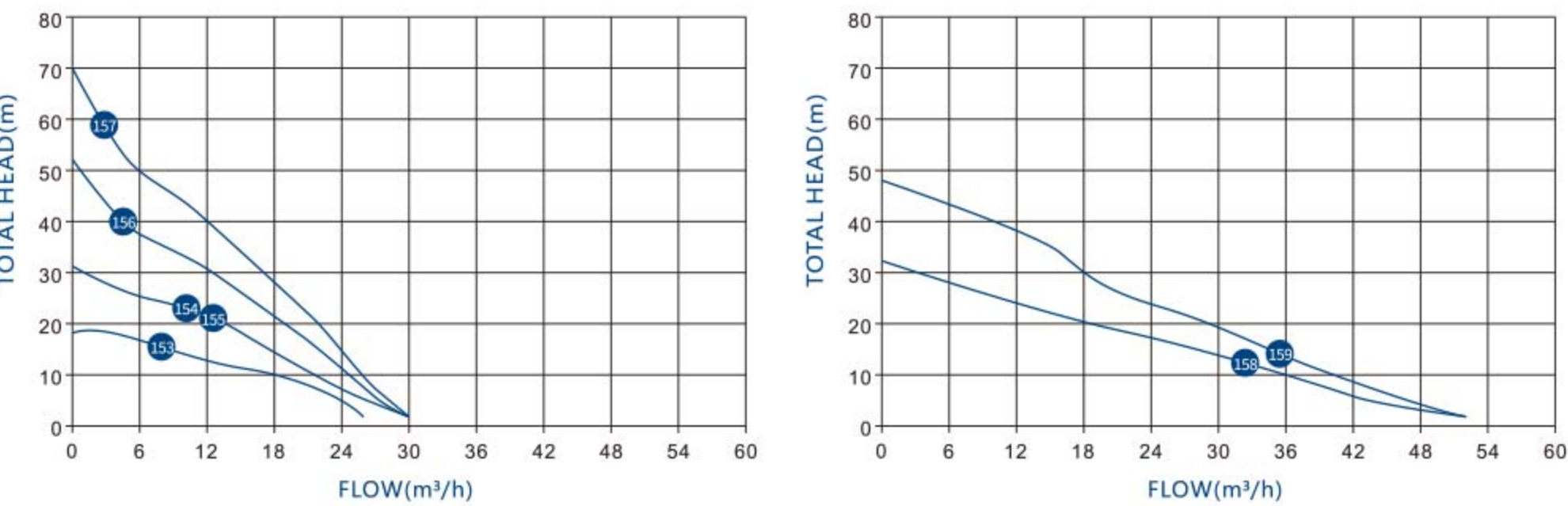


TECHNICAL DATA

NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
114	4SSC4-75-48-600	0.6	0.8	4.0m³/h	75m	1.25"	2m	580W*2
115	4SSC4-115-48-750	0.75	1	4.0m³/h	115m	1.25"	2m	580W*2
116	4SSC4-115-72-750	0.75	1	4.0m³/h	115m	1.25"	2m	580W*2
117	4SSC4-145-110-1100	1.1	1.5	4.0m³/h	145m	1.25"	2m	580W*3
118	4SSC4-205-110-1500	1.5	2	4.0m³/h	205m	1.25"	2m	580W*4
119	4SSC4-205-180-1500-HV	1.5	2	4.0m³/h	205m	1.25"	2m	580W*4
120	4SSC4-303-220-2200-HV	2.2	3	4.0m³/h	303m	1.25"	2m	580W*6
121	4SSC6.5-45-48-500	0.5	0.7	6.5m³/h	45m	1.25"	2m	580W*2
122	4SSC6.5-67-48-750	0.75	1	6.5m³/h	67m	1.25"	2m	580W*2
123	4SSC6.5-67-72-750	0.75	1	6.5m³/h	67m	1.25"	2m	580W*2
124	4SSC6.5-101-110-1100	1.1	1.5	6.5m³/h	101m	1.25"	2m	580W*3
125	4SSC6.5-146-110-1300	1.3	1.75	6.5m³/h	146m	1.25"	2m	580W*3
126	4SSC6-203-110-1500	1.5	2	6.0m³/h	203m	1.25"	2m	580W*4
127	4SSC6-203-180-1500-HV	1.5	2	6.0m³/h	203m	1.25"	2m	580W*4
128	4SSC6.5-255-220-2200-HV	2.2	3	6.5m³/h	255m	1.25"	2m	580W*6
129	4SSC6.5-300-280-3000-HV	3	4	6.5m³/h	300m	1.25"	2m	580W*7
130	4SSC9-48-48-750	0.75	1	9.0m³/h	48m	2"	2m	580W*2
131	4SSC9-48-72-750	0.75	1	9.0m³/h	48m	2"	2m	580W*2
132	4SSC9-70-110-1100	1.1	1.5	9.0m³/h	70m	2"	2m	580W*3
133	4SSC9-90-110-1500	1.5	2	9.0m³/h	90m	2"	2m	580W*4
134	4SSC9-90-180-1500-HV	1.5	2	9.0m³/h	90m	2"	2m	580W*4
135	4SSC9-135-220-2200-HV	2.2	3	9.0m³/h	135m	2"	2m	580W*6
136	4SSC9-220-280-3000-HV	3	4	9.0m³/h	220m	2"	2m	580W*7
137	4SSC14.5-45-48-750	0.75	1	14.5m³/h	45m	2"	2m	580W*2
138	4SSC14.5-45-72-750	0.75	1	14.5m³/h	45m	2"	2m	580W*2
139	4SSC15-55-110-1100	1.1	1.5	15m³/h	55m	2"	2m	580W*3
140	4SSC16-70-110-1500	1.5	2	16m³/h	70m	2"	2m	580W*4
141	4SSC16-70-180-1500-HV	1.5	2	16m³/h	70m	2"	2m	580W*4
142	4SSC18-95-220-2200-HV	2.2	3	18m³/h	95m	2"	2m	580W*6
143	4SSC18-137-280-3000-HV	3	4	18m³/h	137m	2"	2m	580W*7
144	4SSC19-35-110-1100	1.1	1.5	19m³/h	35m	2"	2m	580W*3
145	4SSC20-48-110-1500	1.5	2	20m³/h	48m	2"	2m	580W*4
146	4SSC20-48-180-1500-HV	1.5	2	20m³/h	48m	2"	2m	580W*4
147	4SSC20-70-220-2200-HV	2.2	3	20m³/h	70m	2"	2m	580W*6
148	4SSC20-82-280-3000-HV	3	4	20m³/h	82m	2"	2m	580W*7
149	4SSC25-25-110-1500	1.5	2	25m³/h	25m	2"	2m	580W*4
150	4SSC25-25-180-1500-HV	1.5	2	25m³/h	25m	2"	2m	580W*4
151	4SSC30-38-220-2200-HV	2.2	3	30m³/h	38m	2"	2m	580W*6
152	4SSC30-50-280-3000-HV	3	4	30m³/h	50m	2"	2m	580W*7



PERFORMANCECURVES



TECHNICAL DATA

NO.	Model	Power		Max. Flow	Max. Head	Outlet (Inch)	Cable	Solar Panels
		Kw	Hp					
153	4/6SSC26-18-110-1100	1.1	1.5	26m³/h	18m	3"	2m	580W*3
154	4/6SSC30-31-110-1500	1.5	2	30m³/h	31m	3"	2m	580W*4
155	4/6SSC30-31-180-1500-HV	1.5	2	30m³/h	31m	3"	2m	580W*4
156	4/6SSC30-52-220-2200-HV	2.2	3	30m³/h	52m	3"	2m	580W*6
157	4/6SSC30-70-280-3000-HV	3	4	30m³/h	70m	3"	2m	580W*7
158	4/6SSC52-32-220-2200-HV	2.2	3	52m³/h	32m	3"	2m	580W*6
159	4/6SSC52-48-280-3000-HV	3	4	52m³/h	48m	3"	2m	580W*7

