

National Dairy Development Programme

(Dairy Hub)

Machinery and Equipment Specifications

1.4 Solar Irrigation System

Specifications for Solar Water Pump (2- 2.5 HP, 2.0 inch) for Irrigation

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	Specifications	Minimum Requirement	Bidders' response Yes/No If no please specify
1	Type	Solar powered centrifugal, self-priming	
2	Model	Specify	
3	Brand	Specify	
4	Country of Origin	Specify	
5	Application	Clean to slightly turbid water- wells, tanks, or streams	
6	Operation	Solar PV powered through solar pump controller; battery-free; automatic start/stop with sunrise/sunset	
7	Inlet / outlet size	2 inch suction and 2 inch delivery	
8	Motor power	2 – 2.5 HP	
9	Solar pump controller	Solar pump controller/inverter compatible with the motor; LCD/LED display of voltage, frequency and operating status	
10	Controller protection	Specify	
11	PV mounting structure	Hot-dip galvanized steel or Aluminum structure , foundation bolts and clamps	
12	Capacity	Minimum 6 m³/h at 35 m TDH sunlight	
13	Suction lift	Minimum 7 m (self-priming type)	
14	Pump casing	Cast iron or stainless steel, corrosion-resistant finish	
15	Mounting	Rigid base plate with mounting holes; vibration-free	
16	Cables	UV-resistant double insulated copper cable (min4 mm²) min 30 m, MC4 connectors; motor cable of min 20 m	
17	Electrical safety	DC isolator, fuses, surge protection device, lightning arrestor and proper earthing of PV structure	
18	Accessories & Tools	2-inch foot valve with strainer, 2-inch hose connectors with clamps, replacement wear-and-tear spares	
19	Installation	Supply, installation, testing and commissioning by the supplier, including training of farm staff on operation and maintenance	
20	Warranty	Pump, motor and controller: minimum Two years; PV modules: minimum 10 years product warranty and 25 years performance warranty	
21	Quality Standards Certificates		
22	Past Supply experience and feedback of users	Specify	
23	Availability of spare parts technical support and after sale service in Island wide.	Specify	
24	Availability of all accessories, relevant operation and maintenance manuals in Sinhala and Tamil.	Specify	

25	A practical demonstration of the machine and its operation will be provided upon request by the Technical Committee.	Specify	
26	Availability of after sale service	Maintenance and spare parts availability	
27	Price without VAT		
28	VAT		
29	Price with VAT		
Technical details & product brochure should be attached with the tender document			

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Date

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Bidder's Signature

	Specifications	Minimum Requirement	Bidders' response Yes/No If no please specify
1	Type	Solar powered centrifugal, surface mounted, and self-priming	
2	Brand and modal	Specify	
3	Country of Origin	Specify	
4	Application	Clean to slightly turbid water- wells, tanks, or streams	
5	Operation	Solar PV powered through solar pump controller; battery-free; automatic start/stop with sunrise/sunset	
6	Inlet / outlet size	Min1.0 inch (25 mm) suction and 1.0 inch (25mm) delivery	
7	Motor power	Min 1.0 HP (0.75 kW), rated for continuous duty	
8	Solar pump controller	Solar pump controller/inverter compatible with the motor, LCD/LED display of voltage, frequency and operating status	
9	Controller protection	Dry-run, over-voltage, under-voltage, overload, short-circuit and over-temperature protection; float switch	
10	PV mounting structure	Hot-dip galvanized steel or Aluminum structure with foundation bolts and clamps	
11	Total head	Minimum 30 m	
12	Min discharge	Not less than 60 liters/minute (3.6 m³/hour) full sunlight	
13	Suction lift	Minimum 6 m (self-priming type)	
14	Pump casing	Cast iron or stainless steel, corrosion-resistant finish	
15	Mounting	Rigid base plate with mounting holes; vibration-free	
16	Cables	UV-resistant double insulated copper cable (min4 mm²) min 30 m, MC4 connectors; motor cable of min20 m	
17	Electrical safety	DC isolator, fuses, surge protection device, lightning arrestor and proper earthing of PV structure	
18	Accessories & Tools	1-inch foot valve with strainer, 1-inch hose connectors with clamps, replacement wear-and-tear spares	
19	Installation	Supply, installation, testing and commissioning by the supplier, including training of farm staff on operation and maintenance	
20	Warranty	Pump, motor and controller: minimum Two years; PV modules: minimum 10 years product warranty and 25 years performance warranty	
21	Quality Standards Certificates	Specify	
22	Past Supply experience and feedback of users	Specify	

23	Availability of spare parts technical support and after sale service in Island wide.	Specify	
24	Availability of all accessories, relevant operation and maintenance manuals in Sinhala and Tamil.	Specify	
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