KIRLOSKAR PUMPS

Solar Water Pumping System

Enriching Lives

SOLAR PRODUCT CATALOGUE

KIRLOSKAR BROTHERS LIMITED
Established 1888
A Kirloskar Group Company

Enriching Lives

SKU4

Kirloskar 4” Solar AC Submersible Pumpset

FEATURES

High Efficiency and Energy Saving Design
Innovative design manufactured at state of art plant, delivers optimum efficiency with lower energy consumption resulting in, significant cost saving.

Material of Construction
All the parts are Non Corrosive by nature

Dynamically Balanced Rotating Parts
Minimum vibrations protect components from damages during the operations, consistent performance as concentricity is maintained

Lightweight and Compact Design
Constructed with special grade engineering materials, compact designs for ease of handling and installation.

Splined Shaft
Splined shaft made by cold extrusion technology with high surface strength provides better life and good axiality.

Flatter Efficiency Curve
Minimum variations in efficiency during entire operating range increases the utility of pumpset for variable conditions.

Suitable for Horizontal Applications
Motor with ball bearings are suitable for horizontal installation for water transfer at high heads in residential complex

TECHNICAL SPECIFICATION

Head Range	:	Upto 183 meters
Discharge Range	:	Upto 90000 LPD
Power Ratings	:	0.37 to 2.2 kW (0.5 to 3 HP)
Type of Cooling	:	Oil Cooled
Insulation	:	F Class
Protection	:	IP 68

MATERIAL OF CONSTRUCTION

Pump Housing	:	Stainless Steel
Pump Shaft	:	Stainless Steel
Motor Housing	:	Stainless Steel
Motor Shaft	:	Stainless Steel
Pump Bushes	:	NBR
Impeller	:	Noryl
Diffuser	:	Noryl
NRV	:	Stainless Steel
Suction	:	Stainless Steel
Bearing type	:	Ball bearing

APPLICATIONS

- Domestic and community water supply.
- Water supplies for high rise building.
- Gardening and small farm irrigation.
- Construction site.
- Ground Water supply to water works.

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Performance chart for SKU4 Series (100 mm) Borewell solar AC submersible pumpset

Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)

Sr. No.	Pump Model	Power rating		No. of Stages	Outlet Size (mm)	Rated Current (A)	Phase	Duty Head (mtr)	Duty Head Discharge (LPD)	Shut off Head (mtr)	Head Range (mtr)	Minimum PV Module Capacity (Wp)	Rated Voltage	Minimum Vmp (DC)	Maximum Voc (DC)
		kW	HP												
1	SKU4-0208	0.37	0.5	08	32	4.50	3	28	8490	39	21-31	650	120	175	260
2	SKU4-0307	0.37	0.5	07	32	4.50	3	32	12870	45	24-35	650	120	175	260
3	SKU4-0221	0.55	0.75	21	32	8.00	3	75	8490	98	56-83	1000	120	175	260
4	SKU4-0310	0.55	0.75	10	32	8.00	3	46	12870	64	35-51	1000	120	175	260
5	SKU4-0228	0.75	1.0	28	32	8.50	3	100	8490	130	75-110	1200	120	175	260
6	SKU4-0314	0.75	1.0	14	32	8.50	3	64	12870	89	48-70	1200	120	175	260
7	SKU4-0807	0.75	1.0	07	32	8.50	3	31	34230	41	23-34	1200	120	175	260
8	SKU4-0709	0.75	1.0	09	32	8.50	3	38	30880	58	29-42	1800	120	175	260
9	SKU4-0240	1.1	1.5	40	32	10.00	3	143	8490	190	107-157	1800	155	220	460
10	SKU4-0321	1.1	1.5	21	32	10.00	3	96	12870	128	72-106	1800	155	220	460
11	SKU4-2504	1.1	1.5	04	50	10.00	3	12	90090	22	9-13	1800	155	220	460
12	SKU4-0328	1.5	2.0	28	32	11.00	3	128	12870	179	96-141	2200	160	220	460
13	SKU4-0718	1.5	2.0	18	32	11.00	3	74	30880	119	56-81	2200	160	220	460
14	SKU4-0814	1.5	2.0	14	32	11.00	3	63	34230	82	47-69	2200	160	220	460
15	SKU4-1509	1.5	2.0	09	50	11.00	3	29	64350	58	22-32	2200	160	220	460
16	SKU4-2506	1.5	2.0	06	50	11.00	3	18	90090	33	14-20	2200	160	220	460
17	SKU4-0340	2.2	3.0	40	32	11.70	3	183	12870	255	137-201	3200	230	350	460
18	SKU4-0727	2.2	3.0	27	32	11.70	3	112	30880	174	84-123	3200	230	350	460
19	SKU4-0821	2.2	3.0	21	32	11.70	3	94	34230	123	70-103	3200	230	350	460
20	SKU4-1514	2.2	3.0	14	50	11.70	3	45	64350	84	34-50	3200	230	350	460
21	SKU4-2509	2.2	3.0	09	50	11.70	3	25	90090	50	19-28	3200	230	350	460

Use KBL Jalverter® - solar pump controller for trouble free and consistent product performance.

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SKSS

Kirloskar 4” Solar AC Submersible Pumpset

FEATURES

High Efficiency and Energy-saving Design
Innovative design manufactured at state of art plant, delivers optimum Efficiency with lower energy consumption resulting in, significant cost saving.

Material of Construction
All the parts are Non Corrosive by nature

Dynamically Balanced Rotating Parts
Minimum vibrations protect components from damages during the operations, consistent performance as concentricity is maintained

Lightweight and Compact Design
Constructed with special grade engineering materials, compact designs for ease of handling and installation.

Splined Shaft
Splined shaft made by cold extrusion technology with high surface strength provides better life and good axiality.

Flatter Efficiency Curve
Minimum variations in efficiency during entire operating range increases the pumpset for variable conditions.

Suitable for Horizontal Applications
Motor with ball bearings are suitable for horizontal installation for water transfer at high heads in residential complex

TECHNICAL SPECIFICATION

Head Range	:	Upto 100 meters
Discharge Range	:	Upto 96000 LPD
Power Ratings	:	1.5 to 3.7 kW (2 to 5 HP)
Type of Cooling	:	Oil Cooled
Insulation	:	F Class
Protection	:	IP 68

MATERIAL OF CONSTRUCTION

Pump Housing	:	Stainless Steel
Pump Shaft	:	Stainless Steel
Motor Housing	:	Stainless Steel
Motor Shaft	:	Stainless Steel
Pump Bushes	:	NBR
Impeller	:	Stainless Steel
Diffuser	:	Stainless Steel
NRV	:	Stainless Steel
Suction	:	Stainless Steel
Bearing type	:	Ball bearing

APPLICATIONS

- Domestic and community water supply.
- Water supplies for high rise building.
- Gardening and small farm irrigation.
- Construction site.
- Ground Water supply to water works.

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Performance chart for SKSS Series (100 mm & 150 mm) Borewell solar AC submersible pumpset

Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)

Sr. No.	Pump Model	Power rating		No. of Stages	Outlet Size (mm)	Rated Current (A)	Phase	Duty Head (mtr)	Duty Head Discharge (LPD)	Shut off Head (mtr)	Head Range (mtr)	Minimum PV Module Capacity (Wp)	Rated Voltage	Minimum Vmp (DC)	Maximum Voc (DC)
		kW	HP												
1	SKSS4E-0210	1.5	2.0	10	50	11.0	3	30	55000	45	23-33	1800	160	220	460
2	SKSS6J-0305*	2.2	3.0	05	65	11.70	3	30	96000	45	23-33	3000	230	350	460
3	SKSS4E-0315	2.2	3.0	15	50	11.70	3	50	57000	75	38-55	3000	230	350	460
4	SKSS4D-0320	2.2	3.0	20	50	11.70	3	70	37000	100	53-77	3000	230	350	460
5	SKSS4E-0525	3.7	5.0	25	50	9.5	3	70	62400	100	66-96	4800	415	570	800
6	SKSS4E-0528	3.7	5.0	28	50	9.5	3	100	40800	150	74-108	4800	415	570	800

* model suitable for 150mm borewell

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SHHF

Kirloskar 6” Solar AC Submersible Pumpset

FEATURES

Sand Fighter Designs
Innovative Sand Fighter Designs restricts the entry of sand in motors, protects the pump and motor bushes to perform well in sandy bore wells and increase pumpsets life.

Dynamically Balanced Rotating Parts
Minimum vibrations protect components from damages during the operations, consistent performance as concentricity is maintained.

Longer and Trouble Free Life
High grade engineering materials, Stainless Steel Shaft, Bronze Bushes, Heavy duty Carbon + SS Thrust Plate, 99.9 % Electro Grade Copper Rotor and Winding Wires for longer and trouble free life.

High Head Applications
The pump has been designed to deliver large volumes of water for high head applications, helping customers to achieve high turnaround time and productivity.

Glycol - Mixed Water
Motors filled with specially developed Glycol mixed water to improve the anti- freezing properties of motor and prevent corrosion.

TECHNICAL SPECIFICATION

Head Range	:	Upto 100 meters
Discharge Range	:	Upto 171000 LPD
Power Ratings	:	3.7 to 7.5 kW (5 to 10 HP)
Type of Cooling	:	Water Filled
Insulation	:	B Class
Protection	:	IP 68

*Under ideal condition with suitable cable size

MATERIAL OF CONSTRUCTION

Pump Shaft	:	Stainless Steel
Motor Body	:	Stainless Steel
Motor Shaft	:	Stainless Steel
Pump Bushes	:	LTB
Impeller	:	Stainless Steel
Diffuser	:	Stainless Steel
NRV	:	Stainless Steel
Suction	:	Stainless Steel
Thrust Bearing	:	Carbon + SS

APPLICATIONS

- Irrigation in horticulture & agriculture.
- Domestic and community water supply.
- Sprinkler and drip irrigation.
- Rural water supply.
- Ground Water supply to water works.

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Performance chart for HHF Series (150 mm) Borewell solar AC submersible pumpset

Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)

Sr. No.	Pump Model	Power rating		No. of Stages	Outlet Size (mm)	Rated Current (A)	Phase	Duty Head (mtr)	Duty Head Discharge (LPD)	Shut off Head (mtr)	Head Range (mtr)	Minimum PV Module Capacity (Wp)	Rated Voltage	Minimum Vmp (DC)	Maximum Voc (DC)
		kW	HP												
1	S100HHF-0505	3.7	5.0	05	50	10.0	3	50	91200	70	38-55	4800	415	570	800
2	S80HHF-0506	3.7	5.0	06	50	10.0	3	70	62400	100	53-77	4800	415	570	800
3	S150HHF-0805	5.5	7.5	05	65	18.20	3	50	128250	75	38-55	6750	330	460	800
4	S100HHF-0806	5.5	7.5	06	50	18.20	3	70	87750	100	53-77	6750	330	460	800
5	S60HHF-0810	5.5	7.5	10	50	18.20	3	100	57375	150	75-110	6750	330	460	800
6	S200HHF-1005	7.5	10.0	05	65	19.50	3	50	171000	75	38-55	9000	415	570	800
7	S150HHF-1006	7.5	10.0	06	65	19.50	3	70	117000	100	53-77	9000	415	570	800
8	S100HHF-1008	7.5	10.0	08	50	19.50	3	100	76500	150	75-110	9000	415	570	800

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KSS

Kirloskar 4” Solar DC Submersible Pumpset

FEATURES

High Efficiency and Energy-saving Design
Innovative design manufactured at state of art plant, delivers optimum Efficiency with lower energy consumption resulting in, significant cost saving.

Material of Construction
All the parts are Non Corrosive by nature.

Dynamically Balanced Rotating Parts
Minimum vibrations protect components from damages during the operations, consistent performance as concentricity is maintained

Lightweight and Compact Design
Constructed with special grade engineering materials, compact designs for ease of handling and installation.

Flatter Efficiency Curve
Minimal drop in efficiency during entire operating range, resulting in lower operating cost

TECHNICAL SPECIFICATION

Head Range	:	Upto 90 meters
Discharge Range	:	Upto 72000 LPD
Power Ratings	:	0.75 to 3.7 kW (1 to 5 HP)
Type of Cooling	:	Water Cooled
Insulation	:	F Class
Protection	:	IP 68

MATERIAL OF CONSTRUCTION

Pump Shaft	:	Stainless Steel
Motor Housing	:	Stainless Steel
Motor Shaft	:	Stainless Steel
Pump Bushes	:	NBR
Impeller	:	Stainless Steel / Noryl
Diffuser	:	Stainless Steel / Noryl
NRV	:	Stainless Steel
Suction	:	Stainless Steel
Thrust Bearing	:	Carbon OR Carbide

APPLICATIONS

- Domestic and community water supply.
- Water supplies for high rise building.
- Gardening and small farm irrigation.
- Construction site.
- Ground Water supply to water works.

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Performance chart for KSS Series (100 mm) Borewell solar DC submersible pumpset

Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)

Sr. No.	Pump Model	Power rating		No. of Stages	Outlet Size (mm)	Rated Current (A)	Phase	Duty Head (mtr)	Duty Head Discharge (LPD)	Shut off Head (mtr)	Head Range (mtr)	Minimum PV Module Capacity (Wp)	Rated Voltage	Minimum Vmp (DC)	Maximum Voc (DC)
		kW	HP												
1	KSS-0114	0.75	1.0	14	32	6.5	3	60	10000	90	45-66	900	70	100	260
2	KSS-0128	0.75	1.0	28	32	6.5	3	90	5000	120	68-99	900	70	100	260
3	KSS-0314	2.2	3.0	14	50	8.5	3	50	69000	70	38-55	3000	230	350	460
4	KSS-0514	3.7	5.0	14	50	8.5	3	70	72000	100	53-77	4800	380	570	800

Use KBL Jalverter® - solar pump controller for trouble free and consistent product performance.

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SKDI

Kirloskar Solar
AC Surface Pumpsets

FEATURES

Flatter Efficiency Curve
Minimum variations in efficiency during entire operating range increases the utility of pumpset for variable conditions.

Design to Prevent Overloading
Lesser chances of motor burning as motor did not get overloaded even if the pump is operated at a head lower than recommended and saving substantial cost from maintenance and breakdown.

Replaceable Wearing Parts
All wearing parts within the pumps are easily accessible and replaceable which provides ease of maintenance thereby extending the life of the pump.

Dynamically Balanced Rotating Parts
Minimum vibrations protect components from damages during the operations, consistent performance as concentricity is maintained

CED – Cathodic Electro Deposition
CED is the latest coating technology for corrosion resistance with uniform coating, provides 5 times more protection over conventional painting, resulting in longer life. All major CI parts of Kirloskar pumps coming in contact with the water are CED coated

Automatic Air Release
Automatic releases air when starting the pump which ensures swifter and smoother operations. Eliminating the necessity of operating air release cock and ensures swifter and smoother operations.

Mechanical Seal
Superior quality of mechanical seal ensures zero leakage, lower friction loss, protect wearing of shaft resulting easy maintenance and longer life

TECHNICAL SPECIFICATION

Head Range	:	Upto 30 meters
Discharge Range	:	Upto 270000 LPD
Power Ratings	:	0.35 to 5.5 kW (0.5 to 7.5 HP)
Insulation	:	F Class
Protection	:	IP 55

MATERIAL OF CONSTRUCTION

Impeller	:	Cast Iron / Bronze / Stainless Steel
Delivery Casing	:	Cast Iron
Motor Body	:	Cast Iron
Pump Shaft	:	Stainless Steel
Sealing	:	Mechanical Seal

APPLICATIONS

- Air conditioning and refrigeration system.
- Cooling Towers.
- Clear water handling at high pressure in Industries.
- Irrigation in horticulture & agriculture
- Firefighting system

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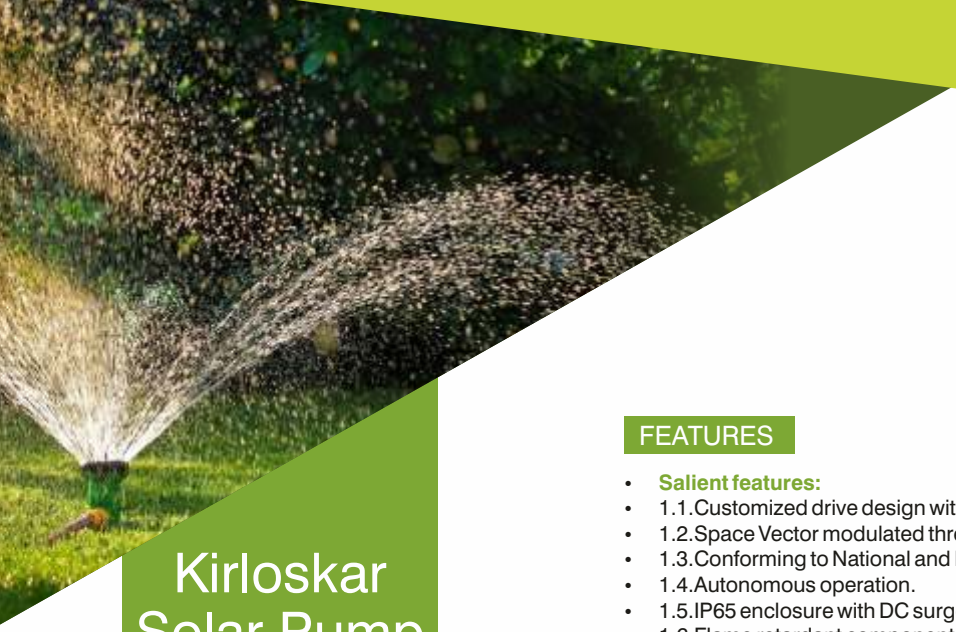
Performance chart for SKDI solar AC surface pumpset

Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of 7.15 kWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)

Sr. No.	Pump Model	Power rating		Suction Nozzle (mm)	Delivery Nozzle (mm)	Maximum Current (A)	Phase	**Duty Head (mtr)**	**Duty Head Discharge (LPD)**	Shut off Head (Mtr)	Head Range (Mtr)	Minimum PV Module Capacity in Wp	Motor Voltage	Minimum Vmp (DC)	Maximum Voc (DC)
		kW	HP												
1	SKDS-0510	0.37	0.5	50	40	3.60	3	8	64350	9.6	6.2 - 9.0	650	120	170	260
2	SGMC-116	0.75	1	50	40	6.40	3	10	118400	18.5	8.5-15	900	120	170	260
3	SKDI-216	1.5	2	65	50	10.30	3	10	178200	15.8	9.5 - 14.0	1800	120	170	260
4	SKDI-235	1.5	2	50	40	12.10	3	30	51480	33.9	24.0 - 31.5	1800	120	170	260
5	SKDI-314	2.2	3	80	80	9.0	3	10	267300	15.5	8.5 - 12.0	2700	230	350	460
6	SKDI-325	2.2	3	65	50	9.0	3	20	132300	29.4	18.0 - 24.0	2700	230	350	460
7	SKDI-527	3.7	5	80	65	8.0	3	20	216000	28.8	17.0 - 26.0	4800	400	570	800
8	SKDI-852	5.5	7.5	65	50	11.50	3	40	180180	56.5	33.0 - 45.0	6750	415	570	800

Use KBL Jalverter® - solar pump controller for trouble free and consistent product performance.



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Kirloskar Solar Pump Controller

FEATURES

- **Salient features:**
- 1.1.Customized drive design with inbuilt Maximum Power Point Tracking(MPPT)
- 1.2.Space Vector modulated three phase output with maximum conversion e ciency of more than 98%
- 1.3.Conforming to National and International standards.
- 1.4.Autonomous operation.
- 1.5.IP65 enclosure with DC surge suppressor
- 1.6.Flame retardant components
- 1.7.Higher rating latest generation Intelligent IGBT Power Modules for reliability.
- 1.8.Much higher Cree-age and clearance to meet Indian climate
- 1.9.Easy service-ability in remote places reducing cost of ownership.

Protections:

- 2.1.Sensor-less dry run
- 2.2.Under Voltage
- 2.3.Over Voltage
- 2.4.Reverse polarity
- 2.5.Output Short Circuit
- 2.6.Phase imbalance

Operation and maintenance:

- 3.1.Ready to use system
- 3.2.User accessible MCB operation
- 3.3.Visible LEDs for status indication.
- 3.4.LCD display and keypad for easy programming.
- 3.5.Hinged door facilitates easy service/replacement of PCBs.
- 3.6.Door open sensing using limit switch.
- 3.7.SPD and feedback system for safe operation.
- 3.8.Single PCB design for easy replacement.
- 3.9.1.2mm CRCA sheet metal enclosure.
- 3.10.Bigger heatsink for reduced temperature and increased operational life.
- 3.11.Internal circulating fan to avoid hot spots inside the enclosure which increases the life.
- 3.12.LED and LCD display to monitor working and parameters
- 3.13.Fault memory for diagnostics
- 3.14.Provision for remote monitoring, Bluetooth connectivity and remote ON/OFF through SMS.

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Solar Pump Controller Specification							
Sr. No	Model	HP	Rated Power in kW	Rated Amps(A)	Minimum PV Module Capacity in Wp	Minimum Vmp	Maximum Voc
1	J2.1	0.5	0.37	8	1200	170	460
2	J2.1	0.75	0.55	8	1200	170	460
3	J2.1	1	0.75	8	1200	170	460
4	J2.1 A	1	0.75	8	900	100	250
5	J2.1	1.5	1.1	10	1500	220	460
6	J2.1	2	1.5	10	1800	220	460
7	J2.1	3	2.2	10	3000	350	460
8	J2.9	4	3	10	4000	570	800
9	J2.9	5	4	10	4800	570	800
10	J2.10	7.5	5.5	20	6750	570	800
11	J2.10	10	7.5	20	9000	570	800
13	J3.7	15	11	30	14400	570	800
15	J3.8	20	15	40	19200	570	800
17	J3.8	25	18.5	50	24000	570	800
18	J3.9	30	22	80	28800	570	800
19	J3.9	35	26	80	33600	570	800
20	J3.9	40	30	80	38400	570	800

www.kirloskarpumps.com

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KIRLOSKAR BROTHERS LIMITED

Established 1888

A Kirloskar Group Company

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