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## DC PUMP / SOLAR PUMP



### Technical Matter :

- These pumps are DC pumps and special made where AC power is not available.  
One can run these pumps on car/truck battery or even on solar power.
- DC motors are of 3000 rpm and are of PMDC type so efficiency is high and Maintenance is very less.
- All pumps are fitted with mechanical seal and we offer pumps with various Material of construction.
- **Bigger pumps can be made as per customer's requirements.**
- Pumps will be of self priming, centrifugal and gear type, piston type etc and can be used for any.  
Type of liquids like diesel, petrol, oil, water, salt water, hot water etc.



AMP Details Of Solar Pump			
VOLTS	12	24	36
HP			
0.25	20	10	6.66
0.5	40	20	13.33
1	80	40	26



## Water Rating Chart For Centrifugal Monoblock and Coupled Pump

Model	HP	Size	Head in Meters Discharge in LPM at 3000 RPM																
			6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	
DCMMP-0515	0.5	25 X 25	120	112	108	60	10												
DCMMP-130	1	25 X 25			159	140	125	110	80	56	40	25	0	<b>DISCHARGE</b>					
DCMMP-115	1	40 X 40		325	280	230	100	90									<b>IN</b>		
DCMMP-224	2	50 X 50				350	315	300	280	210	180	150	120	70			<b>LPM</b>		
DCMMP-325	3	65 X 50			552	528	504	474	444	420	384	348	294						
DCMMP-335	3	50 X 40				300	294	288	282	276	264	252	240	228	216	192	162	120	

## Water Rating Chart For Self-Priming Monoblock and Coupled Pump

Model	HP	Size	Head in Meters Discharge in LPM at 3000 RPM																			
			8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45				
DCHSP-50 SUPER	0.25	12 X 12	16.8	14.4	11.4	7.0													<b>DISCHARGE</b>			
DCHSP-70 SUPER JUMBO	0.5	12 X 12	26	24.5	22	17.6	15	12	9	7.5									<b>IN LPM</b>			
DCHSP-120 SUPER	0.5	25 X 25	39	36	32.4	30.6	28.8	26.4	24	22	18	15	6	3								
DCHSP-160 SUPER	1	25 X 25	50	42	39	36	33	30	27	25	22	22	15	12	10	5.1						
DC-2511 (1450 RPM)	0.5	25 X 25	37	35	32	26	20	10														
DC-3231 (1450 RPM)	1	25 X 25	65	69	62	57	50	42	35	32	30	23										

## SPECIAL PUMPS AND CAPACITY AVAILABLE ON REQUEST

PUMP MODEL	SUCTION AND DELIEVERY	POWER IN WATT	PERFORMANCE TABEL FOR 12 VOLT DC SERIES ,PERFORMANCE AT 6000 RPM						
			FEET	18	26	30	34	38	-
DC-50/12	14 MM	50	LPM	12	8.57	4	2.4	0	-
DC-150/12	20 MM	150	FEET	5	15	30	45	60	68
			LPM	20	15	12	10	8.57	0



Dimension : 267 x170 x110 x130 MM

DC - 150



Dimension : 196 x95 x92 mm

DC - 50

# Water Rating Chart For Mini Surface cum Submersible Pump

PUMP MODEL NO	SUCTION AND DELIEVERY	POWER IN WATT	PERFORMANCE TABEL FOR 12 & 24 VOLT DC SERIES						
			FEET	1	5	-	-	-	-
MINI DC/12	12 MM	50	LPM	3	0	-	-	-	-
MINI DC /24	12 MM	50	FOOT	10	15	18	-	-	-
			LPM	5	2	0	-	-	-



Dimension : 72 x 40 x 50 mm  
MINI SURFACE CUM SUBMERSIBLE PUMP

## SOLAR JET PUMPS PERFORMANCE CHART

No.	MODEL No.	Motor HP/Kw.	Pipe size in MM	Total head in Meter	Total head in meters and											
					Discharge in LPM											
					15	20	25	30	35	40	45	50	55	60	65	70
1	45	1.0/0.75	32X25X25	45	38	33	25	15	10	7	5	-	-	-	-	-
2	60	1.5/1.1	32X25X25	60	-	-	-	33	23	18	11	10	8	5	-	-
3	70	2.0/1.5	32X25X25	70	-	-	-	-	28	26	23	20	16	13	11	9

### Features :

- Suitable for 4" bore or higher bore size.
- Cast iron body and stainless steel / bronze impeller.
- High efficient PMDC / BLDC motor.
- Very economical compare to solar submersible pump.
- Very easily repairable.



- **100 % INDIAN**



**DC GEAR PUMP**



**DC PISTON PUMP**

## Technology:-

An array of solar panels connected in series and parallel configuration generates the power and voltage required for the VFD (Variable Frequency Drive) Controller to drive the motor. The DC to AC frequency converter in the solar drive converts the DC voltage input to the drive to variable 3-phase AC voltage and frequency.

The MPPT algorithm extracts maximum power available from the solar panels during the day and operates the motor at variable speed based on the power input to the drive. As the sunshine varies during the day, power input to the drive varies and the VFD drive generates variable V/F ratio thus controlling the speed of the motor, which in turn regulates the pump impeller speed.

For Pumps and Motor applications that require constant speed, the Solar controller has been designed to accept both the Solar DC input and also the AC input from the Grid. In a situation where the power from the Solar Array is not completely sufficient to provide a stable power output to the motor, the controller monitors the same and the preferential logic built in the controller allows the solar energy on priority and allows the balance power to be supplied by the Grid or DG. This hybrid system helps in reducing the power consumption from the grid during the day. A minimum of 70% Grid energy can be saved during the day.

During power cut situation, proportional power delivered from the Solar PV array allows the system to run at variable speed. Variable speed operation means there is no in-rush or surge of energy during the pump motor start-up, helping to eliminate wear on the motor and pumping system. One of the main causes of pump motor failure is the stress applied to motors during a full voltage start-up.

The Pump controller's variable speed operation ramps up the speed smoothly, which eliminates starting stress. This should allow the pump motor to last longer. There is no starter box or motor starter to purchase, maintain or have fail. The start winding is controlled by the controller and the controller provides motor overload protection.





<b><u>Applications:-</u></b>	<b><u>Appliances that can be powered on solar:-</u></b>
<ul style="list-style-type: none"> <li>• Textile Industries</li> <li>• Food Processing Industries</li> <li>• Chemical Industries</li> <li>• Pharmaceutical Industries</li> <li>• Automobile Industries</li> <li>• Cement Industries</li> <li>• Agro Based Industries</li> <li>• Agriculture &amp; Irrigation</li> <li>• Salt Refineries &amp; Salt Pans</li> <li>• Large Apartment Complexes</li> <li>• Hotels, Lodges &amp; Restaurants</li> <li>• Effluent Treatment Plants</li> </ul>	<ul style="list-style-type: none"> <li>• Surface Pumps</li> <li>• Submersible Pumps</li> <li>• Vacuum Pumps</li> <li>• Air Compressors</li> <li>• Sewing Machines</li> <li>• Spinning Mills</li> <li>• Grinding Machines</li> <li>• Petrol Pumps</li> <li>• Effluent Treatment Pumps</li> </ul>

### **SALIENT FEATURES**

- Can be used for any kind of Motor or Pump Loads ranging from 1 HP to 100 HP.
- Uses MPPT (Maximum Power Point Tracking) to deliver energy at various Solar Energy Levels.
- System can be used for existing Pumps and Motors and hence no replacement of new loads.
- Accepts both Solar and Grid Input. Works completely on Solar during the day and on Grid during the night. Built in preferential Logic gives first priority to Solar Energy.
- Water pumped even in morning, evening and in cloudy weather at low speed flow for over 12 hours per day
- Long term, environment friendly , economic solution with proven technology based on variable speed drive.
- During rainy season or cloudy weather, the water pumping system can be powered by grid supply.

### **Following Protection are inbuilt in the VFD controller**

- Lightning
- Panel Reverse Polarity
- Short Circuit
- Over Load , Over Voltag
- Multiple pumps can be connected to single controller
- DC Power Meter included

**Special note : we are able to provide AC powered submersible pump which work on solar panel through controller.**

