



Solar pumps and controllers



[www.mymecsolar.com](http://www.mymecsolar.com)



[shiva@mymecindia.com](mailto:shiva@mymecindia.com)



+91 9741 51 4646

# ***Solar Pumps have to be integral to India's Solar Vision***



*As per a study, a switch from the conventional diesel-electricity-powered irrigation pumps to solar ones can help India reach 38% of its expected 175 GW renewable energy target by 2022.*



*India can surpass the target of attaining 100 GW solar energy by 2022 if it replaces all traditional water pumps by solar pumps.*



*Converting some 30 million grid-attached or diesel pumps to solar pumps is gaining momentum but the number stood at 96,376 Solar Pumps in FY 2017-18.*





# *Solar Pumps can make a transformational impact in every sense*



*We have to think of solar pumps as a way to battle irrigation-issues & reduce carbon-emissions.*



*Intensive deployment of solar pumps can reduce ongoing subsidies to the farm sector and improve energy-access to farmers.*



*Solar pumps can also basically enrich farmers with an additional & climate-proof income, coming from selling surplus power to distribution companies.*



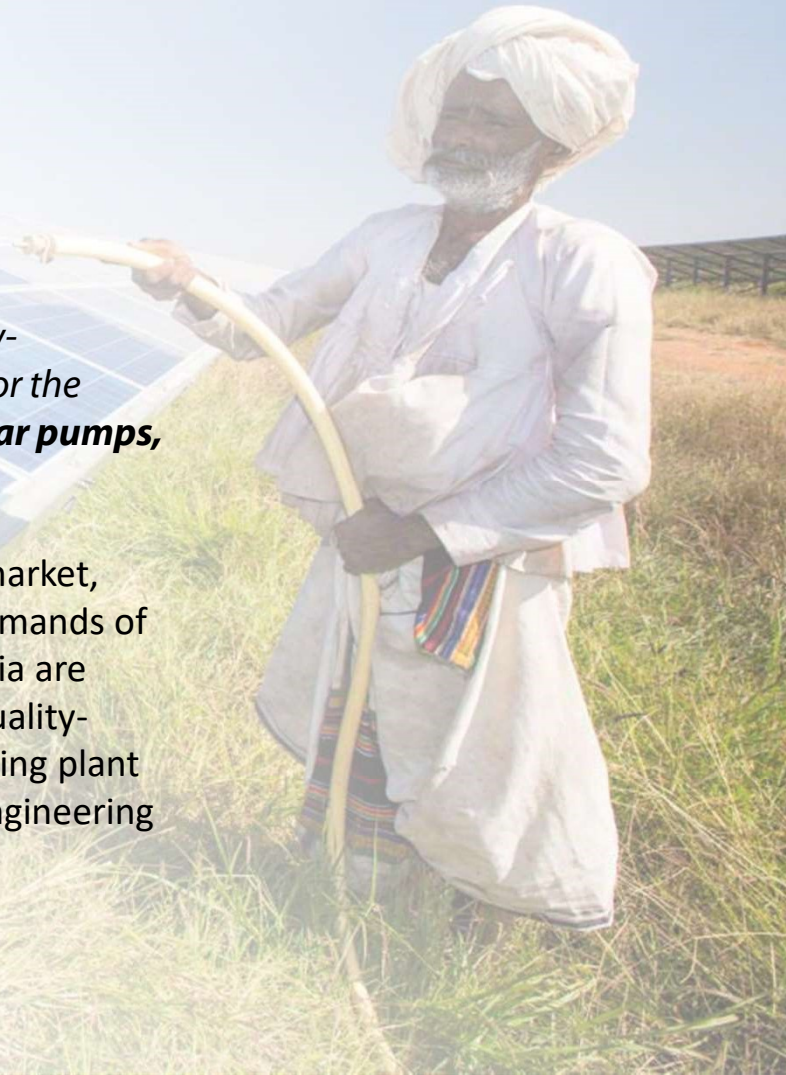
*Solar pumps, providing farmers & society with control over the water & power-supply, can also go a long way to ensure groundwater conservation.*



## ***MEC Solar: A vibrant organization to empower farmers, society & nation***

*Knowing that with its reliability, cost-effectiveness, efficiency & low-maintenance, solar is the most realistic renewable energy option for the future, **MEC Solar began working to manufacture & supply solar pumps, as a division of Mercury Electronic Corporation from 2016.***

To cater to the needs of the new and emerging Indian solar market, MEC has invested in facilities and technologies to cater to the demands of Solar pumps across the Indian sub-continent. Our facilities in India are fully equipped to advise customers, design, test, fabricate and quality-assure on all aspects of fluid mechanics in India. Our manufacturing plant in Bangalore, is a showcase of immaculate manufacturing and engineering practices!







## ***Our Vision***

*We envision ourselves being in the Top 2 DC Pump manufacturer in India and within top 5 in the world by 2022.*



## ***Our Mission***

*We're on a mission to leverage our core technology-expertise to address unmet national and international needs, including critical sustainable development challenges such as water, energy & climate.*



## *Top Management is a bunch of inventive & passionate minds*



### **Dr. Shivakumar HM**

*A Six Sigma Black Belt expert, with 13 years of experience in developing more than 20 products like, Motors, Pumps, Solar Solar panels & Grid Sync Panels, Inverters & Control Panels etc. for solar business.*



### **Mr. Dilli Babu**

*A rich experience of 18 years in Motor Designing & manufacturing industry, with expertise in BLDC & PMSM Motor Design for EV and pumping applications*



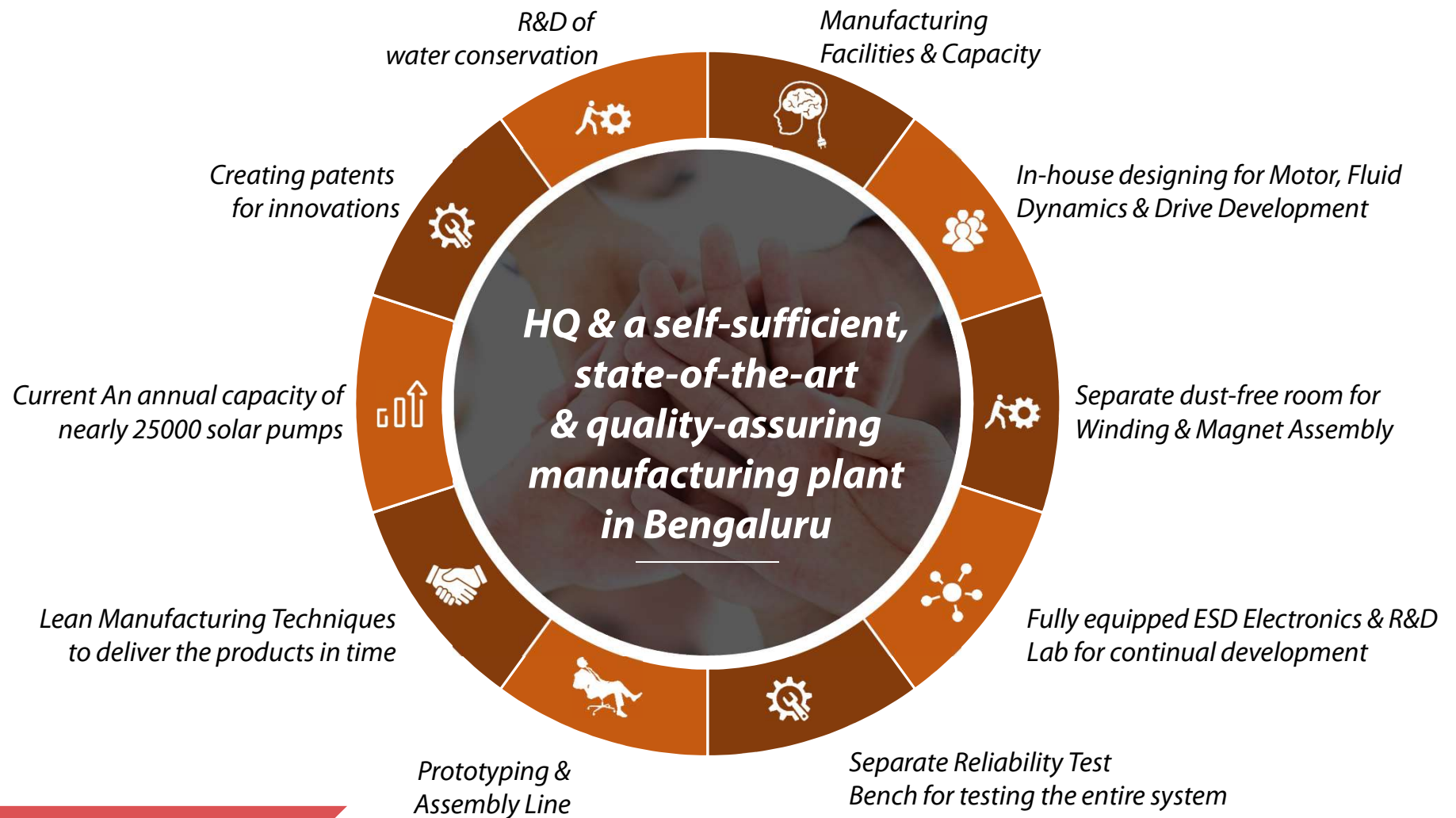
### **Mrs. Asharani SS**

*A deep experience of 12 years Electronic industry, with expertise on sourcing, supply-chain management, business-development & Electronics manufacturing and recognition for achieving minimum manufacturing costs for Electronic products with better sourcing & supply-chain*



### **Dr. P Venkateshwalu**

*A vast experience of 20 years in ISRO & 10 years in solar industry, with a work-portfolio of more than 4 solar panel manufacturing set-ups, 400+ MW-projects, development of PV modules for ISRO-satellites, development of Energy Storage-based PV Systems with Li-ion batteries & audit of 20+ solar panel manufacturers for supply*



# ***Our solar pumps:***

## ***A utility wonder***



*Supremely  
energy-efficient*



*Handy & Easy to to  
operate*



*Maintenance  
free*



*Robust  
and reliable.*



*Affordable*



*Remote Operation  
friendly (even on mobile  
phones)*



*Remote Monitoring  
friendly (even on  
mobile phones)*



*Tankful & Tank empty  
Sensors for auto-start &  
auto stop*



*Application based  
pumps available.*



*Longer life*



## Peerless features of our products :-



### Motor

- ❖ Rewindable DC motors for easy servicing.
- ❖ 6 segment bearing used to avoid failures
- ❖ Lesser thick and lesser watt loss stampings used for higher performance.
- ❖ Carbon thrust bearing and bushes for longer life
- ❖ 2mm + thick motor body for rigidity.



### Pump

- ❖ SS fabricated impellers for higher efficiency and longer life
- ❖ Casted part of the pumps also made in SS.
- ❖ Specially designed for higher RPM for solar application.

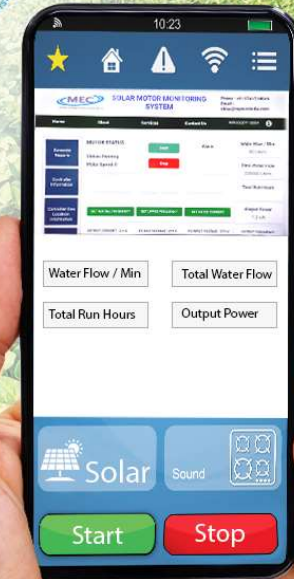


### Controller

- ❖ Rugged design.
- ❖ Advanced MPPT technology with higher efficiency up to 99.9%.
- ❖ Auto tracking at day time
- ❖ High Over load capacity
- ❖ High Frequency up to 600Hz
- ❖ Protections: Dry Run, Short circuit, over current of pump, Low frequency, Minimum power Etc

# Remote Monitoring Features :-

- ❖ Network based GEO location of controller installed
- ❖ IMEI based unique Identification of unit
- ❖ Date and time logging
- ❖ SD card logging of all above said parameters
- ❖ Works with input DC voltage range from 5V to 28V
- ❖ Master Modbus RTU protocol implemented for any slave device(Drive)
- ❖ LED indications for user references
- ❖ Long range antenna with strong reception and transmission through network signal
- ❖ Parameters can be sent through TCP/IP, HTTP or to Website link directly
- ❖ IP address and port number of private TCP server can be changed through normal text input message
- ❖ Incoming Call based controlling Drive
- ❖ Temporary NOR Flash memory installed for saving Drive parameters when network is not available
- ❖ Control of Drive parameters through web / Mobile app
- ❖ Control of Motor ON/OFF through web / Mobile app
- ❖ Centralized server & database for data storage and security
- ❖ Control & Monitor room for all devices installed over the globe
- ❖ Over the air updates for Drive parameters





# ***Applications come across as a key solution to reliable & consistent access to clean water***

- ✓ *Drinking Water to villages & urban settlements.*
- ✓ *A self-sustaining irrigation-solution (Drip, Sprinkler etc.) for farming sector.*
- ✓ *Secondary Source of income or savings by way of grid connected pumps.*
- ✓ *Utility in livestock water-usage, reducing the dependency on fossil-fuel such as diesel and others.*
- ✓ *Our solar pumps can considerably improve the quality of life for Farmers..*
- ✓ *Lift irrigation projects with our higher capacity pumps.*
- ✓ *Pumps available for Borewells, River, Open well, Water canal, ETC*
- ✓ *Special systems available for rural RO water projects.*





# ***Different teams for specific expertise & experience***

**2**

Engineers

*Mechanical design team*

**3**

Engineers

*R&D and testing team*

**1**

Engineer

*Motor design team*

**3**

Engineers

*Installation and commissioning team*

**3**

Engineers

*PCB & Embedded design team*

**4**

Engineers

*Service engineers*

**1**

Engineer

*GUI development*

## ***We look forward to work with you with our strength of assets & competencies***



*Clarity &  
transparency in  
business  
relationship*



*Structured plans to  
use the funds*



*Readiness to ramp up  
our manufacturing  
capabilities to make  
as many as 1,50,000  
solar pumps annually*



*Technological  
knowhow*



*Passion &  
commitment to the  
quality of the  
products*

# ***We extend Service Support, in terms of design, install & repair, of the highest order***

*A good spread of Service Centres & Service Engineers*

State	No of service partners	No of service engineers
Jammu & Kashmir	1	1
Haryana	1	2
New Delhi	1	2
Rajasthan	1	1
Gujarat	1	2
Maharashtra	4	10
Telangana	1	1
Andhra Pradesh	2	4
Chhattisgarh	1	2
Odisha	1	2
Jharkhand	1	4
West Bengal	1	1
Karnatak	6	10
Kerala	1	2
Tamilnadu	4	6
<b>Total</b>	<b>27</b>	<b>50</b>





## ***Our channel partners across globe***

