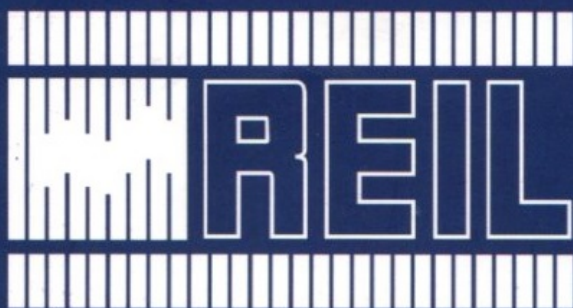
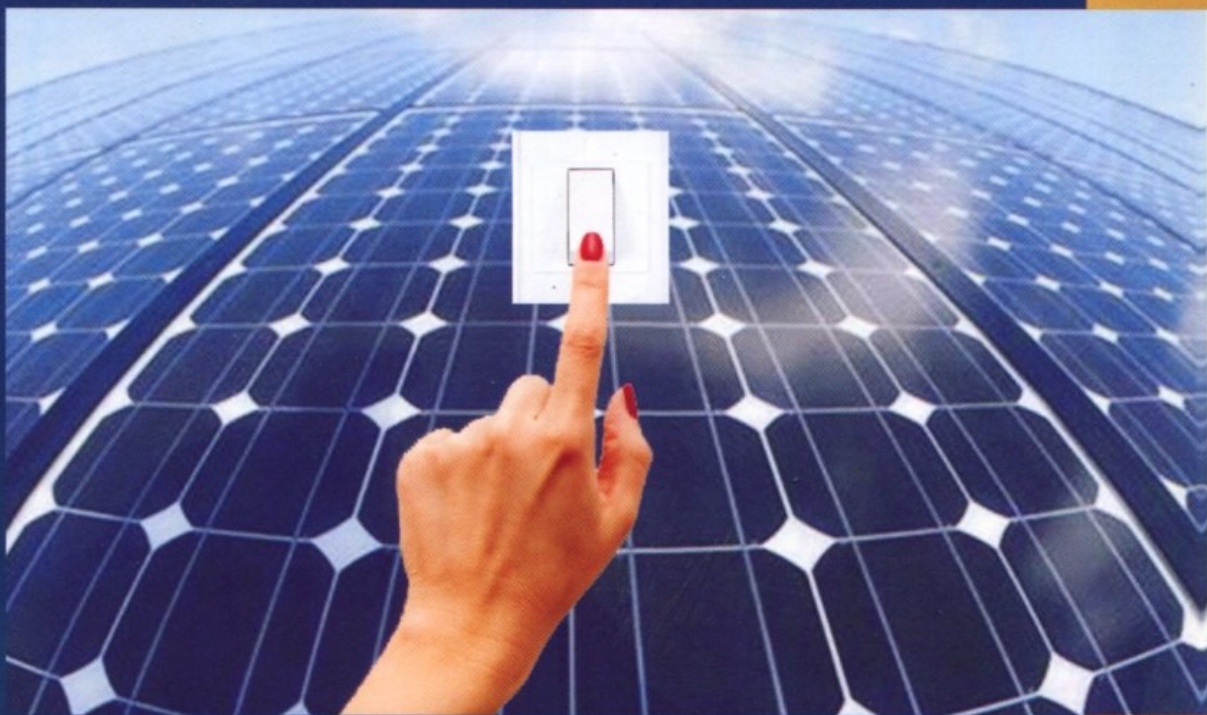



To make
better world
Switch to Solar Energy



REIL

Shaping Rural India

through Electronics, Renewable Energy and IT Solutions



HARNESSING SOLAR ENERGY FOR BETTER QUALITY OF LIFE

About Solar Photovoltaic Module

REIL offers a wide range of state-of-the art Solar Photovoltaic (SPV) Modules suitable for a variety of applications and ideal for power generation at remote areas, where conventional power is not available or power supply is erratic. It is a clean, green, noiseless, non-polluting and maintenance free source of energy. These SPV Modules manufactured with the stringent quality standard requirements and capable of withstanding the extreme environmental conditions throughout the life.

Applications

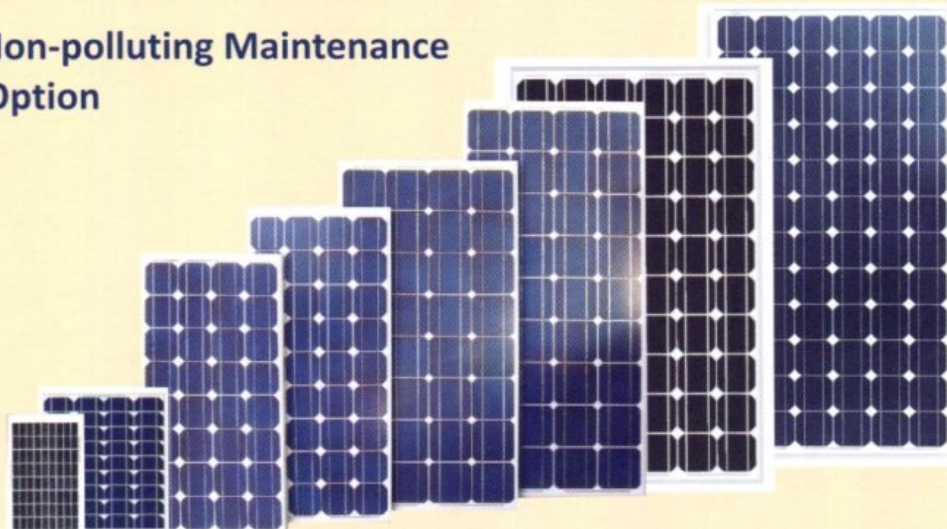
Domestic lighting | Street lighting | Portable lantern | Water Pumping | Grid Interactive Power Plants | Roof-top Power Plants | MW Size Power Plants | Building Interpreted Photovoltaic Power Plants | Battery Charging | Community TV | Microwave Repeater Station | Railway Signaling and Lighting | Off-shore Platforms | Power Pack for Village Electrification | Crop Sprayer | Glow Sign and Advertisement Boards.

Features

- High efficiency crystalline silicon solar cells.
- Solar cells laminated between back sheet (Polyester Tiddler) and high transitivity toughened glass with EVA to provide environmental protection.
- Rugged Weather-proof nylon terminal box for output connections.
- Anodized aluminum frame provides structural support for mounting and shock resistance.
- Manufactured to stringent quality standards and tested to withstand adverse environmental conditions
- Approved by SEC, MNRE, TEC and RDSO.
- UL certified as per IEC 61215:2005 International Quality Standard with S' mark safety certification.

WIDE RANGE OF SOLAR PHOTOVOLTAIC MODULES

A Noiseless Non-polluting Maintenance Free Energy Option

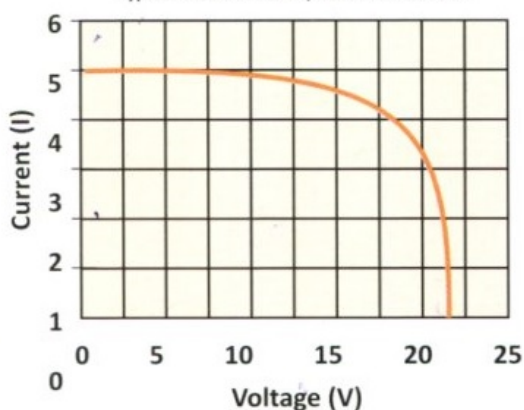


Module Type	10W36	20W36	40W36	75W36	80W36	140W36	150W36	250W60	300W72
Peak Power Output (P max, Watt)	10	20	40	75	80	140	150	250	300
Current at Peak Power Output (I max, Amp)	0.61	1.22	2.36	4.42	4.71	8.24	8.58	8.63	8.58
Voltage at Peak Power Output (V max, Volt)	16.4	16.4	17.0	17.0	17.0	17.0	17.50	29.00	35.00
Short Circuit Current (Isc, Amp)	0.65	1.30	2.50	4.80	5.18	9.0	9.40	9.40	9.40
Open Circuit Voltage (Voc, Volt)	21.5	21.5	21.5	21.8	21.8	21.8	22.00	37.0	44.00
Dimensions (in mm)	305x345x25	495x345x25	905x345x33	785x665x33	865x665x33	1486x666x50	1486x666x50	1658x997x42	1973x997x42

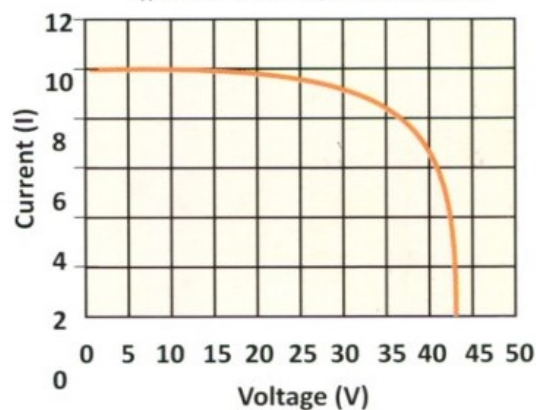
- The above specifications pertain to the standard REIL made SPV Module. REIL can also manufacture and supply SPV Modules of different rating to meet specific technical requirements.
- Electrical specifications mentioned above are at standard test conditions of 100m W/sq.cm. AM 1.5 and at 25°C cell temperature and are within normal production tolerance of +3%
- Due to continuous process innovations, the modules supplied may differ from specified above.

TYPICAL ELECTRICAL CHARACTERISTICS FOR MODULE TYPE

Typical Electrical Characteristics for Module type 75W36
Typical Data at 100mW/Cm² AM 1.5 & 25°C



Typical Electrical Characteristics for Module type 250W60
Typical Data at 100mW/Cm² AM 1.5 & 25°C



MWp SIZE SOLAR POWER PLANT



1 MWp Solar Power Plant Installed at Shri Mata Vaishno Devi Katra Railway Station, Jammu



5 MWp Solar Power Plant Installed at Village Rawara, Taluka Bap, Jodhpur, Rajasthan

GRID INTERACTIVE SOLAR POWER PLANT



FEATURES

- Ideal for remote rural villages where the availability of conventional electricity is either not available or unreliable.
- Can provide power to any AC Load.
- Compatible with conventional power supply.
- Maximum Power Point Tracking System for optimum use of power available.
- The Stand Alone Power Plants can be connected to the conventional grid in case of electrification of the village by conventional method.
- Option of charging through Grid/ Genset. Silent and non-polluting source of electricity.
- Excess power can be exported to Grid through net metering.

SPECIFICATION

SPV Array Capacity	1-5 KWp	10KWp	25KWp
Power Conditioning Unit / String Inverter	1-5 KVA	10KVA	25KVA
Battery Bank	As per requirement	120V,600AH	240V, 800AH
Input Nominal Voltage	48V or 96V or 120 V DC	120DC	240V DC
Output Voltage	230V,50Hz, Single Phase AC	230V,50Hz, Single Phase AC	415V,50Hz Three Phase AC
SPV Array Capacity	50KWp	100KWp	1 MWp
Power Conditioning Unit / String Inverter	50KVA	100KVA	1MVA
Battery Bank	Not required	Not required	Not required
Input Voltage Range	400V to 750V DC	400V to 750V DC	400V to 750V DC
Output Voltage	415V,50Hz, Three Phase AC	415V,50Hz, Three Phase AC	415V,50Hz Three Phase AC

SPV POWER PACK

Features : • Silent and non polluting source of electricity • Option of charging from grid • Ideal for small shops, nursing homes, offices, rural banks, etc. • Can provide power for lights, fans, computers etc.

SPECIFICATIONS

Model-I

SPV Array Capacity	100 Wp
Battery Bank	12V, 100 AH Tubular Lead Acid Type
Electrical Appliances	11W CFL-3Nos, Pedestal Fan-1No., Mobile Charging Point & Socket for 12V DC TV Set Operation

Model-II

SPV Array Capacity	250 Wp
Battery Bank	12V, 200 AH Tubular Lead Acid Type
Inverter-cum Charge Controller	300 VA Hybrid Type

Model-III

SPV Array Capacity	500 Wp
Battery Bank	12V, 400 AH Tubular Lead Acid Type
Inverter-cum Charge Controller	600 VA Hybrid Type

Model-IV

SPV Array Capacity	1000 Wp
Battery Bank	24V, 400 AH Tubular Lead Acid Type
Inverter-cum Charge Controller	1200 VA Hybrid Type

SOLAR WATER PUMPING SYSTEM

FEATURES

- Drinking water
- Irrigation
- Agriculture related use
- Horticulture
- Animal Husbandry
- Poultry farming
- High value crops
- Orchard
- Seri-culture
- Aqua-culture
- Farming



Type of Pump	DC Surface (Shallow Well)		DC Submersible (Deep Well)		AC Submersible (Deep Well)			
SPV Array (Wp)	1800	3000	3000	4800	3000	4800	6750	9000
Suction Head	7 mtr	7 mtr	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Total Dynamic Head	21 mtr	27 mtr	20 - 100 mtr	20 - 150 mtr	20 - 100 mtr	20 - 150 mtr	20 - 150 mtr	20-150 mtr
Pump Hp	2 HP	3 HP	3 HP	5 HP	3 HP	5 HP	7.5 HP	10 HP
Type of PV Module	Mono/	Mono/	Mono/	Mono/	Mono/	Mono/	Mono/	Mono/
	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline
Type of Structure	Manual/	Manual/	Manual/	Manual/	Manual/	Manual/	Manual/	Manual/
	Auto tracker	Auto tracker	Auto tracker	Auto tracker	Auto tracker	Auto tracker	Auto tracker	Auto tracker
Water Output	180000	165000	63000	67200	57000	62400	87750	117000
(in LPD)	at 10 mtr head	at 20 mtr head	at 50 mtr head	at 70 mtr head	at 50 mtr head	at 70 mtr head	at 70 mtr head	at 70 mtr head

The above water discharge detail as per latest MNRE guideline.

The Water output figures are on a clear sunny day with three times tracking of SPV Panels when Solar Radiation on Horizontal surface is 7.15 KWh /sq mtr/day.

SPV STREET LIGHTING SYSTEM

FEATURES

- Ideal for Remote Area Lighting • Automatic Switching Facility
- Highly Efficient Luminaire • Dusk to Dawn Operation
- Rust Free Mounting Structure • Low Maintenance System

SPECIFICATIONS

Components	Configuration
SPV Module	12V, 74 Wp crystalline silicon module
Lamp	One PL-11 CFL / One LED 12W fixture with built-in-inverter & charge controller
Battery	One 12 V, 75 AH Tubular low maintenance lead acid battery
Other Components	Pole, module mounting structure with hardware, battery box, wires & cables, etc.



SOLAR PHOTO VOLTAIC SYSTEMS FOR ATAL SEVA KENDRAS



Rural Development and Panchayati Raj Department, Govt of Rajasthan has implemented a prestigious project "ATAL SEVA KENDRA (ASK)" at 248 nos. of Panchayat Samities and 9168 nos. of Gram Panchayats in Rajasthan. At these Kendra's computers shall be provided to promote sustainable solutions for improving the quality of life in rural areas by providing digital connectivity for need based agriculture solutions, communication, healthcare, governance and other diverse services. In order to achieve these objectives the computers are energized by Solar Power which is a reliable power source in rural area's.

Rajasthan Electronics & Instruments Ltd., (A Mini Ratna Public Sector Undertaking) located in Jaipur has executed this prestigious project namely 1.12 KWp and 2.24 KWp Solar PV system for computers at Atal Seva Kendra's (ASK) of Gram Panchayat & Panchayat Samiti level. This is the **Largest off Grid Solar PV Project (10.8MWp)** in the country till date. REIL has vast experience in production of PV modules & execution of turn key projects for bridging energy gap in rural areas through design, supply, installation & commissioning of solar power packs for specific applications. REIL has also developed website <http://www.reilsolar.com/> for online controlling, monitoring & complaint handling of such kind of projects efficiently.



SPECIFICATIONS

S.No.	Details	BNRGSK at Panchayat Samiti	BNRGSK at Gram Panchayat
1.	Capacity of SPV Array	2.24 KWp	1.12 KWp
2.	Battery Bank Capacity	96V, 300AH	48V, 300AH
3.	Power Conditioning Unit (PCU)	4 KVA	2 KVA
4.	No. of Computers to be Operated	10 Nos.	5 Nos.
5.	Duration of Operation	6 Hours/Day	6 Hours/Day

SOLAR PV SYSTEMS FOR AFFORDABLE HOUSING SCHEMES

We have designed a Solar Power Solution for affordable housing schemes. These Solar Power Solutions are provided to the beneficiaries as the integral part of housing project. Having a house equipped with the Solar Power is not a dream now. REIL has implemented a prestigious project for electrification of over 42,000 nos. of low cost houses under Lohiya Grameen Awas Yojna (LGAY) in 48 Districts of Uttar Pradesh. Each House is provided with 120Wp SPV System consisting of 120Wp SPV Module, Battery Bank (12V, 100AH), one DC ceiling fan, three nos. of LED lights and one mobile charging point. REIL has also developed website <http://www.reil.solar/uplgay/> for online controlling, monitoring & complaint handling of such kind of projects efficiently.



SOLAR LANTERN

SPV LANTERN (CFL TYPE)

FEATURES

- Use Friendly
- Easy to Operate
- Charging Time of 5 Hours on a Clear Sunny Day
- Compact and Attractive in Design
- Completely Maintenance free
- Mobile Charging Facility (Optional)



Specifications

SPV Module	Crystalline silicon type 12V, 10V/12Wp
Lamp	Compact fluorescent lamp 5/7W, 4/2 pin arrangement
Battery	12V, 7AH, lead acid, sealed maintenance free, absorbed electrolyte type
Operation	5-6 hours/day
Indications	Charging ON, Battery Under voltage
Housing	ABS with polycarbonate /acrylic transparent diffuser

SPV LANTERN (LED TYPE)

FEATURES

- Portable, Lightweight,
- All Weather Durable and Easy To Use
- Super Bright White Led's with 1,00,000 Hour Life Expectancy
- Give Bright Ambient Light
- Very Low Power Consumption
- Mobile Charging Facility (Optional)



Specifications

SPV Module	Crystalline silicon type 6V, 3 Wp
Lamp	Ultra bright white LED lamp, 4,80,000 mcd
Battery	6V, 4AH lead acid, sealed maintenance free, absorbed electrolyte type
Operation	5-6 hours/day
Indications	Charging ON, Battery Under voltage
Housing	ABS with polycarbonate /acrylic transparent diffuser

SPV HOME LIGHTING SYSTEM



FEATURES

- Easy to Operate • Compact and Attractive in Design
 - Three Days Battery Backup for Rainy Season
- Charging Time of 5 Hours on a Clear Sunny Day
 - Daily 4 Hours of Operation
- Electronic Sub-assembly Easily Replaceable in Case of Fault Occurrences

SPECIFICATIONS

Components	Model-I	Model-II&III	Model-IV&V
Crystalline Silicon PV Module	18 Wp	37 Wp	74Wp
Compact Fluorescent Lamp/Fan	One Lamp	Two Lamps or One Lamp & One Fan	Four Lamps or Two Lamps & One Fan
Tubular Low Maintenance Lead Acid Battery	12V, 20AH	12V, 40AH	12V, 75 AH
Other Components	Charge controller, module mounting hardware, battery box, wires-cables & switches, etc.		

SOLAR PV POWER PLANTS INCLUDING ROOF-TOP



100KWp Solar Power Plant installed at Parwati Dairy commissioned in Year 2015



3.6KWp Solar PV System installed at Roof-Top of Railway Non-AC Coach commissioned in the year 2014



6X50 KWp SPV Power Plants installed at MNIT, Jaipur commissioned in Year 2014



14 KWp SPV Power Plant installed on the Pathway at Central Prison, Trivandrum Commissioned in the year 2013



10 KWp SPV Power Plant Installed at Govt. Women's Engineering College, Ajmer in Year 2013



10 KWp SPV Power Plant Installed at G.P. Women's College, Imphal in Year 2013



100 KWp SPV Power Plant installed at Kashmir Govt. Polytechnic, Srinagar (J&K) commissioned in the Year 2012



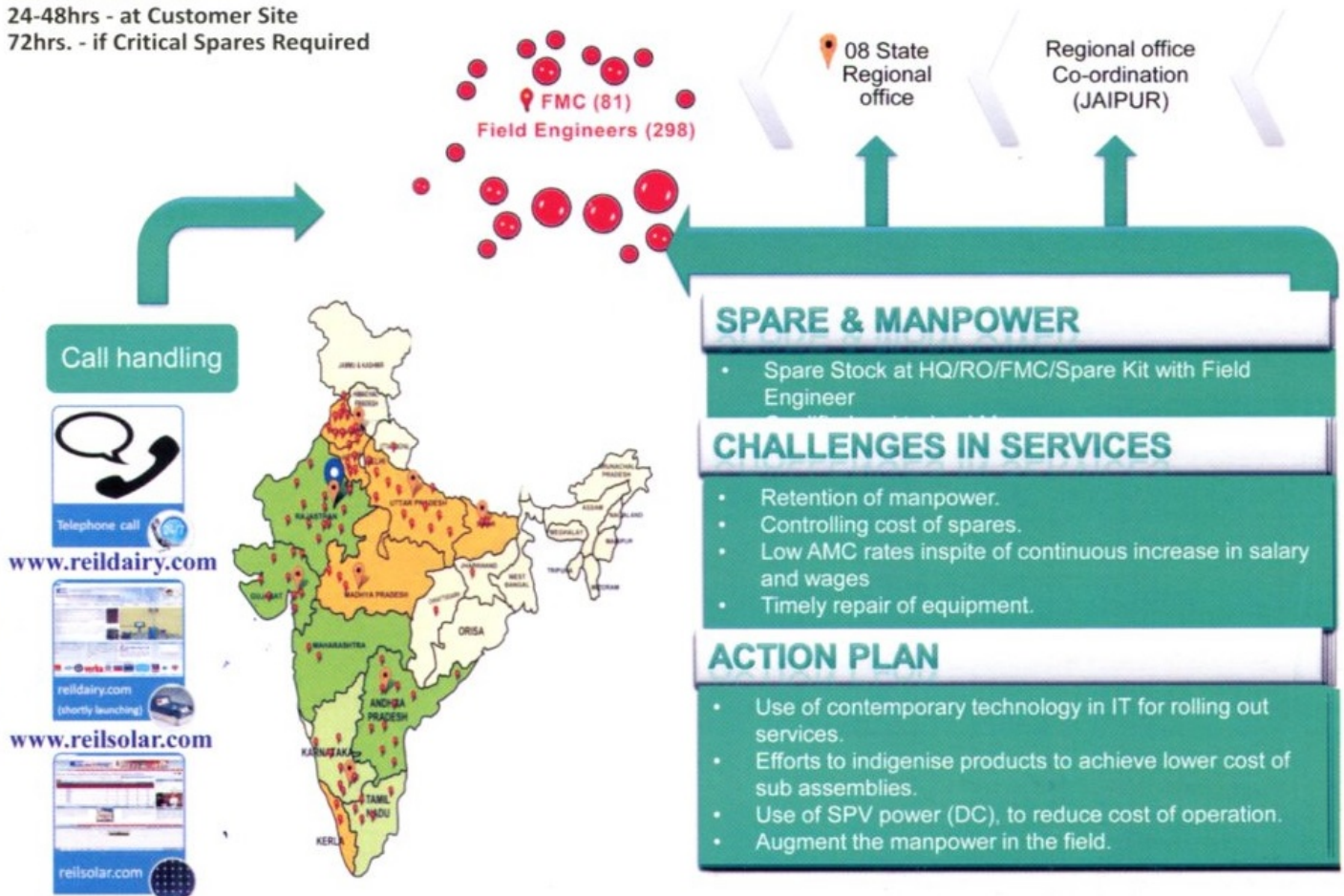
50 KWp SPV Power Plant for Indian Army Installed at a remote site in Manipur installed in the year 2012

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Easily access-able after sales service**

SUPPORT AND SERVICES...USP OF REIL

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A Well Earned **'MINI RATNA'**

(A status conferred by the Department of Public Enterprises, Ministry of Industry, Government of India in 1997)



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