



www.skipperlimited.com



STRENGTHENING THE FUTURE
OF SOLAR ENERGY
**SOLAR MODULE
MOUNTING SYSTEMS**



CONTENTS



- HIGHLIGHTS
- ABOUT THE COMPANY
- OUR VISION
- OUR MISSION
- SKIPPER SOLAR
- SKIPPER ADVANTAGE
- PRODUCTS
- MACHINERIES
- QUALITY
- AWARDS



**A 240
Million USD
company**

**Collective experience
of more than
35 Years**

**Exporting
products
to more than
20 countries
of the world**

**Largest
Player in India
among Top 10
in the world
(in terms of manufacturing capacity)**

**Manufacturing
capacity of
230000
MTPA**

**Team size of
2000+
Employees
across the
nation**

**A GOI recognized
star export
house**



" At **Skipper Limited** we believe actions reflects the ultimate destination of our transformed company – an enterprise positioned to capture sustainable growth through a laser focus on innovating across our product portfolio, building strong brands, and leveraging unparalleled customer service through a wider network."

Mr. Sharan Bansal, Director, Skipper Limited

**Largest
Tower
Supplier
– Awarded by
PGCIL**



ABOUT THE COMPANY

Skipper Limited established in 1981 is one of the leading companies in the Power Transmission & Distribution sector. With over 35 years of domain knowledge, it is the largest in India and among top 10 globally basis the manufacturing capacity of Transmission Towers, Distribution Poles & other Engineering products. When it comes to Power Transmission Towers & Poles, Skipper undertakes each and every activity in the entire value chain, from Angle Rolling, to Fabrication & Galvanizing, Proto Assembly, Load Testing and even EPC line construction. Skipper differentiates its offerings with high quality but cost effective solution for infrastructure providers and telecom operators. Its international footprint spans across continents such as Latin America, Europe, Africa and is spread across 20+ countries. The total manufacturing capacity of its Engineering Products division is 230000 MTPA with 3 Plants in West Bengal (2 in Howrah & 1 in Uluberia) and 1 Plant in Guwahati (Assam).

Skipper Limited is listed at BSE (538562) and NSE (Symbol: SKIPPER) in 2014 & 2015 respectively.





OUR VISION

To produce world – class quality products ensuring robust National Infrastructure development and making India the preferred sourcing hub for Global Infrastructure needs.



OUR MISSION

It aims to continue adding value to its products and services and live up to the expectations of the global demands. Skipper is also working towards using more and more renewable sources of energy so as to reduce carbon footprints. Skipper's Mantra is to deliver value and commitment rather than only products and profits.

SKIPPER SOLAR

Skipper being ranked amongst the largest manufacturers of Transmission & Distribution structures in the world is definitely a big advantage considering its foray into the Solar Industry. The company's active interest in the business can be traced back into the year 2013 – 14 when several solar projects were executed on behalf of major solar companies like Areva Solar , Solarsis & TATA Power Solar. For Areva Solar the company manufactured and supplied structures weighing 10000 tons for a CSP project located at Pokhran, Rajasthan. Similarly for Solarsis & TATA Power Solar, PV rooftop and ground based module mounting structures of 30 tons & 155 tons were installed in Chennai & Jharkhand. The company boasts of 4 state of the art Engineering products manufacturing plants in Eastern India. Skipper has a in house design facility with a strong team of Design Engineers and Draughtsmen who continuously develop innovative, construction friendly and cost effective designs.

SKIPPER ADVANTAGE

Skipper is one the lowest cost producers of T&D Structures in the world. We have the unique advantage of producing 100% of our prime raw material in-house. With facilities located in the East, the Company enjoys the following advantages

1) Lower cost of raw-material transportation: The major raw material is procured from SAIL's Durgapur plant, less than 150 kms away. This results in transportation costs of Rs.450-500 a tonne, against the industry average of Rs.2,000- Rs.2,500 per tonne.

2) Integrated Operations: The Company is one of the world's largest and completely integrated manufacturing company. It is into a wide range of inter-related, quality managed value-added products, starting from raw materials, to manufacturing and finally installation. It covers the entire process chain and serves as a one-stop solution where clients can place their trust on Skipper to deliver turn-key solutions. More than 80% of the value addition that takes place between basic raw materials to the conversion of the final finished and installed products, is captured within the Company's manufacturing roofs.

Close Access to Ports: The Company's plant is located in close proximity to the ports in Kolkata and Haldia. Due to this it enjoys a significant advantage on the export.



PRODUCTS

Skipper offers a range of products that cover the entire infrastructure requirement for a solar power plant. We offer customized design solutions as per the unique requirement of each client. All products are thoroughly inspected for quality during various phases of production from input raw material to the finished product.

- **Ground based Module Mounting structures**
- **Roof Top Mounting structures**
- **Module Mounting Accessories**
- **Seasonal Tilt Structures**

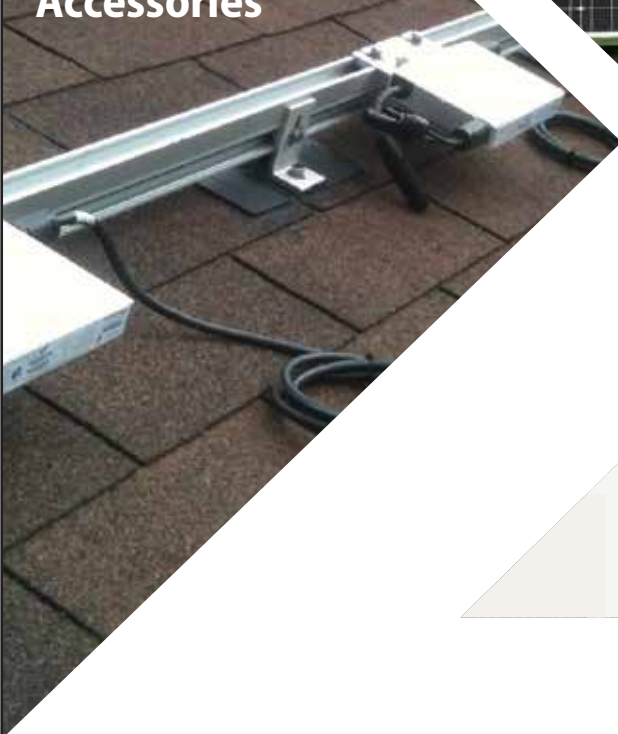


Roof Top Mounting structures

Ground based Module Mounting structures



Module Mounting Accessories



Seasonal Tilt Structures

GROUND BASED MODULE MOUNTING STRUCTURES

Skipper offers designing, fabrication, galvanization and installation of module mounting structures. The structures are optimized to ensure minimum weight (kg) /watt for quick delivery and installation. The products are designed as per the MNRE and the norms taking into consideration adequate wind loading and a long life time of at least 25 years.

The fabricated products are hot dip galvanized to a thickness of 80 microns to 120 microns depending on the corrosive nature of the project location

- Fixed type module mounting structures
- Seasonal tilt controlled module mounting structures
- Single axis daily tracking structures

ROOF TOP MOUNTING STRUCTURES

Roof mounted solar structures are ideal for urban environments and large industrial estates where ground space is premium. Skipper provides excellent design that are economical, easy to install and also very light so that the roof structures are not damaged. The structure designs are standardized and their modular nature ensures easy installation and maximum utilizations of roof spaces. All structures are designed to ensure minimum drilling on the roof and also to avoid any water leakage. Skipper supplies module mounting structures for both flat roofs and slopped roofs.

MODULE MOUNTING ACCESSORIES

Skipper offers module mounting clamps (mid clamps and end clamps) made of galvanized MS. The clamps are available in a standard design for both Thin-film (framed and unframed) and poly-crystal-line modules or in customer specified dimensions.

SEASONAL TILT STRUCTURES

The solar mounting products' adaptability comes into picture with one of the intelligent solutions of Skipper, Seasonal tilt. It is the low cost alternative to tracker systems which facilitates the change in tilt angle to maximize the total annual incident irradiation and total annual energy yield.



MACHINERIES

Skipper Limited's manufacturing facility for solar module mounting structures is at their Uluberia plant, which is spread across 80 acres of land and houses one of India's largest galvanizing unit with a capacity of 8000 tons per month. Skipper's Solar Structures unit will be one of the most modern and sophisticated plant using state of the art machines to produce Module Mounting structures.

This new unit will feature following machineries:

- 1.** 300 mm wide C-purlin roll forming line with pre-punching option capable of producing various section profiles such as 'C', 'Z', 'sigma' etc.
- 2.** 450 mm wide C-purlin roll forming line with pre-punching option capable of producing various section profiles such as 'C', 'Z', 'sigma' etc.
- 3.** 4 mtr x 200 tons press brake capable of forming HR sheets upto 6 mm thick for use in columns of MMS
- 4.** Multiple nos. 'C' type punching presses for offline punching of various sections such as columns, purlins etc.
- 5.** Automatic CTL machine for processing sheets and coils as per requirement of press brake
- 6.** Multiple EOT cranes for seamless material handling of both raw material and finished goods
- 7.** Multiple hot-dip galvanizing units with a production capacity of 2 lacs MTPA capable of galvanizing these structures with a required coating of upto 100 microns
- 8.** In-house HDG fastener manufacturing facility with a production capacity of 6000 MTPA
Total production capacity of this facility will be approx. 25000 TPA with size range varying from 40x40 upto 200x100 'C', 'Z' sections. The machines shall be capable of processing all different types of steel such as HR, CR, GP and Galvalume upto tensile strength of 500 MPA.





QUALITY

Almost 20% of our employee force deals with Quality, which includes the shop floor supervisors, lab assistants, quality engineers. Frequent seminars and workshops are held internally to train the workers to keep them updated on quality controls. Skipper urges and inspires its employees to report mistakes, if any and believes in taking corrective measures before it's too late. The approach is heavily applauded and appreciated by the clients.

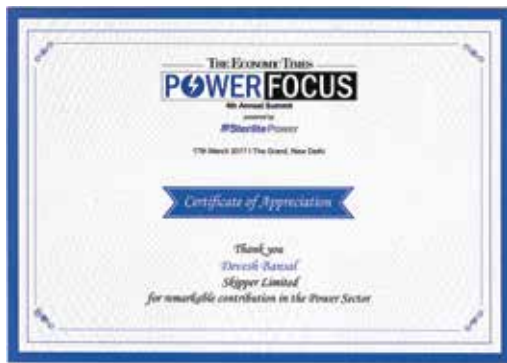
Skipper is a ISI & ISO 9001, ISO 14001 OHSAS 18001 certified company, which assures quality with every project delivery. At Skipper quality of work and safety of personnel are the two most important focus areas, which make it a preferred solutions partner. Robust quality assurance architecture and best in class processes using cutting edge technology.



AWARDS

Skipper as the name suggests has always been a leader in its sphere of operations. This has been acknowledged by several awards and honors the company has been winning across the years marking its seniority in the industry. Few of such awards:

- Largest Tower Supplier by Power Grid Corporation of India Ltd for 2nd consecutive Year, 2017
- Valuable Contribution to the Power Sector by Economic Times , 2017
- Global HR Excellence Awards for Continuous HR innovation for Business Excellence, 2017
- Emerging EPC Player by EPC World Magazine
- Star Performer Award for the year 2015-16 by the 48th EEPC India National Award



Most Valuable Contribution to Power Industry



Largest Tower Supplier



Star Performer Award for the year 2015-16



Emerging EPC Company in Power Transmission



Global HR Excellence



Registered Office : 3A, Loudon Street, Kolkata- 700017, India.
Email: mail@skipperlimited.com, Website: www.skipperlimited.com,
Phone: +91 33 2289 5731/32/33, Fax: +91 33 2289 5733.

Works: Ahmedabad (Gujarat) +917573044588, Guwahati (Assam)
+917578003201, Hyderabad (Telangana) +919515124060, Sikandarabad (Uttar
Pradesh) +91 9810781944, Kolkata (West Bengal) +919830211145