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Uncover an
empowered
tomorrow



**SOLAR PV
MOUNTING
SYSTEMS**

From Us to U

Dear Friends,

Living by John Henry Newman's philosophy - "**Growth is the only evidence of life**", we have evolved into Utkarsh India Limited from Utkarsh Tubes and Pipes Ltd., by diversifying into infrastructural solutions. A nation's growth undoubtedly lies in its infrastructural development.

Expanding our horizons beyond national borders, we have been touching more lives by adding infrastructural development across the globe, proudly contributing to the growth of foreign nations. A feat like this would have been impossible without the invaluable support of our esteemed suppliers, distributors and dealers. I extend my deepest gratitude to them.

Also, without an innovative, talented and passionate team of smart and far-sighted people, scaling the mountains of success over the last 40 years, would have been a dream. A strong and experienced management ensures a smooth flow of the inner workings, much like our pipes. Utkarsh's adeptness stems from this seamless coordination among management, co-workers and our associates.

Sticking to our corporate ethos of 'U are our commitment', we bring the strong promise of consistency and reliability, ensuring optimum consumer satisfaction.

'Customer first' is the motto that drives us to bring you quality.

Regards,

SUNIL BANSAL

UTKARSH BANSAL

SOLAR PV MOUNTING SYSTEMS

WHY UTKARSH

- Large variety of products under one roof
- Products available in bare or zinc coated or with other surface coating as per customer choice
- Fin removed pipes are available
- Pressure Tested (Up to 100 kgf/cm²) Pipes are available
- Only uses ISI Marked Raw Material from SAIL, TATA & HZL
- State-of-the-art Technology & Competent qualified personnel
- Well-equipped Mechanical, Chemical & Metrological Testing Laboratory which facilitates each and every testing related to products according to various national & international standards
- Customised length & end condition available
- Production flexibility which meets their schedule as per various national & international standards
- Crowned ISO 9001 : 2008, ISO 14001 & OHSAS 18001 Certifications
- Whatever the service, grade or standard, Utkarsh offers the best solution for the customer

BALLAST STRUCTURES FOR SOLAR MODULE MOUNTING IN ROOFTOP APPLICATIONS

The Muft Bijli Yojana is a Government Scheme that aims to provide free electricity to households in India. Under the scheme, households will be provided with a subsidy to install solar panels on their roofs. The subsidy will cover up to 40% of the cost of the solar panels. Utkarsh India is a leading manufacturer of Module Mounting Structures (MMS) for both ground-mounted, utility-scale large projects as well as rooftop installations, whether it be rooftop-mounted carports, poultry farms, etc. or industrial/residential buildings. MMS is an essential component of solar installations, ensuring panel placement and maintenance of optimal angles for maximum incidence. The selection of MMS is crucial for performance and energy generation. Ballast-type solar panel MMS for rooftop solar offers a secure way to install photovoltaic panels on rooftops or ground surfaces without piercing the roof. The word "ballasted" refers to the system which is anchored using these heavy materials to ensure stability. Ballasted mounting systems primarily provide stability and support for PV arrays.

SOLAR STRUCTURES FOR PM-KUSUM SCHEME

PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) Scheme aims to ensure energy security for farmers in India, along with honouring India's commitment to increasing the share of installed capacity of electric power from non-fossil-fuel sources to 40% by 2030 as part of Intended Nationally Determined Contributions (INDCs). Utkarsh India specialises in and is one of the largest Solar MMS manufacturers for the PM-Kusum scheme. We engage with clients at the prototype stage and industrialise them for mass manufacturing to enable seamless production and supply, ensuring time-bound implementation of projects across the country.





- A wide range of applications includes

- Car Parking
- Industrial Sheds
- Commercial Sheds
- Airports
- Hotels
- Hospitals
- Community Centres
- Water and Amusement Parks
- Poultry Farms

- Customisable as per different module sizes and customer designs

- High-quality Galvanised Steel

- State-of-the-art manufacturing processes with proper jigs and fixtures to ensure 'First Time Right' fitment

- Optimised logistics to minimise freight costs

- Optimum material utilisation

- Prefabricated structures are delivered to construction sites for faster erection of structures

- Structures suitable to be handled by conventional material handling systems

- High-quality welding as per AWS D1.1, CE EN 1090 EXC2, or Indian Standards for Domestic markets



SOLAR MODULE MOUNTING STRUCTURES (MMS) – CAR PORTS & ROOF MOUNTED

ON DEMAND AND CUSTOMISED SYSTEMS

- Utkarsh India, with its strong manufacturing background, specialises in the manufacturing and supply of 'On Demand and Customised Car port systems'
- Solar car ports are the ideal supplement or alternative for the large-scale use of photovoltaic power generation



SOLAR PV MODULE MOUNTING STRUCTURES (MMS)

GROUND MOUNTED FIXED TILT

Utkarsh India specialises in manufacturing of Ground Mounted Fixed Tilt Module Mounting Structures (MMS), leveraging its extensive in-house experience and capabilities in fabrication, roll forming, and HDG.

The precision MMS are suitable to be seamlessly connected into customisable length tables, tailored to meet specific customer requirements.

All our structures are manufactured and galvanised in our state-of-the-art facilities to ensure the highest quality product.

TYPES OF SECTIONS MANUFACTURED

- **C roll** formed Channel Without Lip
- **C roll** formed Channel With Lip
- **HAT or OMEGA Section /Purlins:** Angular or 90°
- **Z section:** without Lip
- **Z section:** with Lip
- **L Angle Bracing Sections**
- **Tubular Post Sections**
- **Hot-Rolled Sections**

PRODUCTION & QUALITY

Our Torque Tube mill is a state-of-the-art production line capable of producing torque tubes with a variety of materials, such as Black HRC (with HDG), Pre-Galvanised, ZM Coating etc.

Our mill is suitable for producing materials with coating thicknesses ranging from Z140 - Z600 and ZM310

We can form and produce tubes with high-strength materials such as S550GD, which is currently the highest-strength material used in the industry

CNC punching ensures the highest accuracy for tube-to-tube connections

100% traceability of Torque Tubes ensures the highest quality standards

Our in-house Slitting line provides seamless integration into the production line

Platform loading of tubes ensures optimal container utilisation, thereby reducing logistics costs for the customer

Colour coding and colouring on the ends provide easy identification at the site

Our Product Range

Section	Dimensions		Wall Thickness	
	min (mm)	max (mm)	min (mm)	max (mm)
Round Hollow Section	114 (OD)	219 (OD)	2.0	8.0
Square Hollow Section	91 x 91	175 x 175	2.0	8.0
Rectangular Hollow Section	122 x 61	200 x 100	2.0	8.0
Octagonal Section (Across Flat)	120	140	2.0	8.0

Cumulative Capacity: 72,000 MT per annum

Section Length: 4 -12 m | **Catering to YST:** 250 - 550 MPa



Roll-formed steel sections are manufactured from HR coils, catering to both Domestic and International markets. We employ Hot-Dip Galvanised (HDG) anti-corrosion coating complying with ISO 1461:2009 standards for best-in-class surface treatment.

For Domestic Markets: E250A/BR/C or E350A/BR/C from HR steel coils, as per IS2062 standards

For international markets: S235JR/JO/J2, S355JR/JO/J2 or S355MC up to S500MC from HR steel coils, as per EN 10025 standards

Additionally, we provide ZM310 coatings for ZM equivalents, equipped with anti-corrosion coatings for unparalleled quality assurance

For pre-galvanised: S350GD (as per EN 10346 specifications)

For anti-corrosion coating: Z275 up to 2600

A well-established supply chain ensures the continuous availability of HR Coil and pre-coated coils guaranteeing prompt fulfilment of customer demands.

These structures are suitable for

- Utility Scale Solar Power Generation PV farms
- Agricultural use - water pumping
- Poultry farms
- Standalone applications such as mini-grids
- Housing societies
- Community solar





SOLAR MODULE MOUNTING STRUCTURES (MMS) – GROUND MOUNTED FIXED TILT

Utkarsh India started its Torque Tube production in 2024 with a state-of-the-art Tube Mill with the following salient features

- Solid State Contact Type inline Welding (MOSFET & IGBT based)
- Inline Non-Destructive type Eddy Current Testing with sufficient depth
- Inline de-beading on both sides for a fin-cut finish as per customer requirement
- Inline Metallising unit
- Inline Rust prevention system
- Complete in-house facilities such as Chemical and Mechanical testing, Charpy impact testing, Surface table to the entire length of the tube, slope/tilt measurement (inclinometer), SST, Hardness, etc.
- Inline stenciling and hard stamping
- CNC drilling system

SOLAR MOUNTING SYSTEM STRUCTURES – TORQUE TUBE FOR TRACKER

Utkarsh India is a pioneer in ERW Tubes in India. Established in 1995, Utkarsh India is one of the leading companies in India, supplying ERW pipes and tubes of varying sizes.

The in-depth and in-house knowledge of engineering and manufacturing ERW tubes and pipes led Utkarsh India into a peculiar position for expanding its product base in Solar Torque Tubes.

MANUFACTURING & QUALITY

Our state-of-the-art facility for manufacturing Ground Mounted Fixed Tilt Structures is fully equipped with modern machines and equipment capable of delivering world-class, high-quality products.

High-speed, fully automatic cold Roll Forming machines capable of forming materials up to 4.5mm thick

Roll Forming machines equipped with sufficient inline punching stations to minimise offline punching works and thereby minimise errors

A 4m CNC Press Brake to produce small quantity parts with unconventional hole punching

Shearing machines

Power press for offline punching works

Plasma cutting machine for special-shaped components

In-house HDG facilities: We have six (6) in-house HDG baths with lengths up to 12.5m, with a monthly HDG capacity of about 25,000 MT

ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 facilities. Our facilities are also certified as per EN 1090, CE, EXC2 and AWS D1.1

Highest quality of HDG with SHG 99.995% LME-grade zinc

Legal and statutory compliances are fully complied

SOLAR MODULE MOUNTING STRUCTURES (MMS) - GROUND MOUNTED FIXED TILT



W6 American Wide Beam Series

Size	Section Weight (kg/m)
W6 x 7	10.42
W6 x 8	11.91
W6 x 8.5	12.65
W6 x 9	13.39
W6 x 12	17.86
W6 x 15	22.32
W6 x 20	29.76
W6 x 25	37.20

W8 American Wide Beam Series

Size	Section Weight (kg/m)
W8 x 10	14.90
W8 x 13	19.30
W8 x 15	22.30
W8 x 18	26.80
W8 x 21	31.30
W8 x 24	35.70



PRODUCTION AND QUALITY

With our own high-accuracy roll sets for beam sections, our state-of-the-art hot rolling mill is adept at producing sections to the best quality standards and satisfying our customer needs.

Our rolling mill's strategic location close to Durgapur Steel Plant (DSP) and ISP at Durgapur and Asansol respectively in West Bengal is the 'icing on the cake', for any hot rolling mill, providing seamless integration regarding steel billet availability for rolling the desired sections.

Similarly, strategic location of our beam processing lines close to Kolkata port makes us an enviable choice for any buyer, helping to reduce logistics costs and making us cost-effective.

World-class APQP and PPAP processes set Utkarsh India apart, as this is the DNA of our quality system, ensuring the highest quality products for our customers.

Well-defined Quality Control Plans (QCPs) ensure that our customers can be assured of the best quality products.

Specification of C/Z structures that we can supply

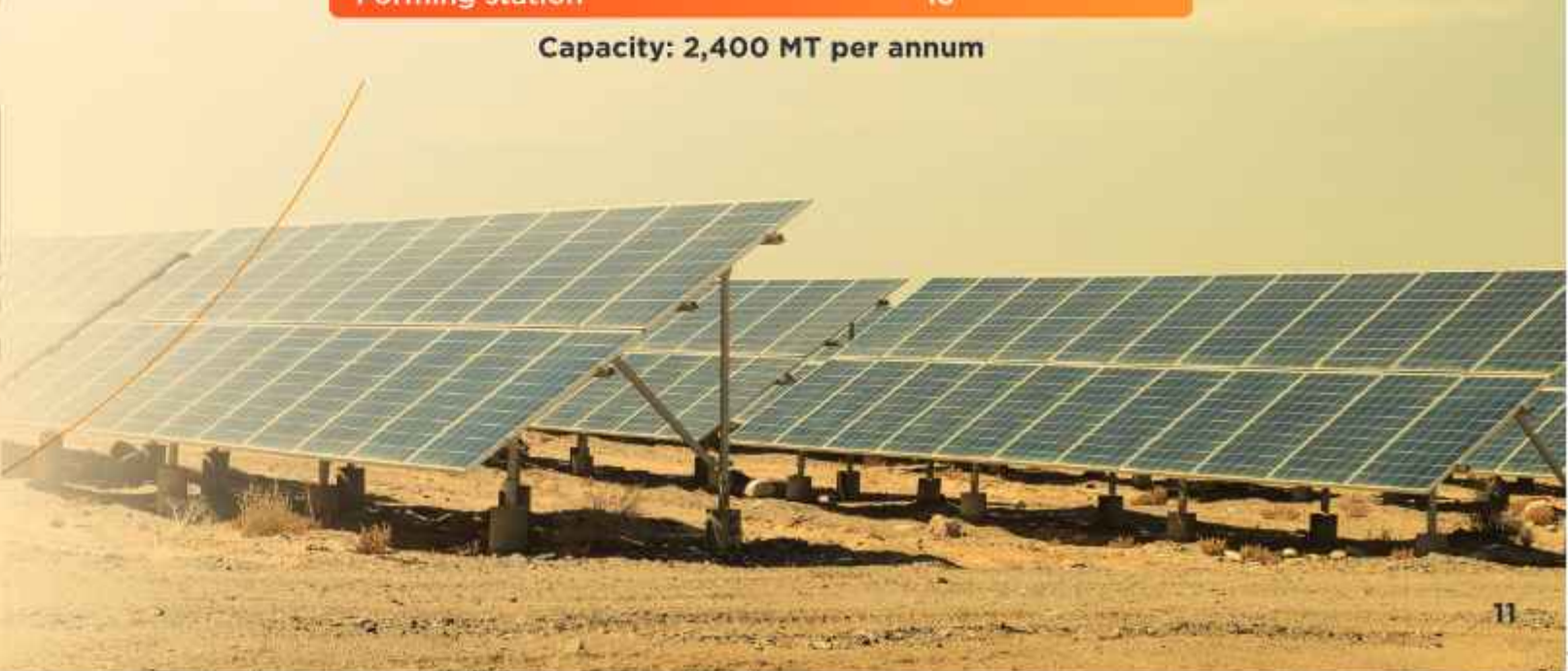
Type	Black HRC, ZM, Pre-Galvanised
Yield strength (YST)	250-550 MPa
Thickness	1.6-4.5 mm
Web	50-350 mm
Height	40-110 mm
Lip	6-25 mm
Nominal forming speed	2-12m/min
Forming station	18

Capacity: 20,000 MT per annum

Specification of HAT structures that we can supply

Type	Black HRC, ZM, Pre-Galvanised
Yield strength (YST)	250-550 MPa
Thickness	0.7-2.5 mm
Web	25-90 mm
Height	30-120 mm
Lip	5-30 mm
Nominal forming speed	0-6m/min
Forming station	18

Capacity: 2,400 MT per annum



SOLAR MODULE MOUNTING STRUCTURES (MMS) – TRACKER SYSTEM



SOLAR BEAM POSTS

Hot Rolling mill with an annual capacity of 72,000 MT

Utkarsh produces cold-formed and hot-rolled posts for 1P and 2P tracker systems according to the requirements of Solar Tracker OEMs

The posts produced are mainly American Wide beams (W beams), European I-beam, and H-beam sections (IPE, IPEA, HEA, and HEB), and cold-formed C channels up to 4.5mm thickness

State-of-the-art beam processing lines capable of cutting, punching, and Hot-Dip Galvanisation

Production as per Domestic and International standards such as IS2062, ASTM, EN and GB standards

Materials from GR 40 up to GR 65

Billets are sourced from Prime Source Mills – Steel Authority of India Limited (SAIL), Rashtriya Ispat Nigam Limited (RINL), and JSW

In-house Capacity

- Hot Rolling: 72,000 MT/ annum
- Beam Processing: 60,000 MT/ annum
- Hot-Dip Galvanising: 300,000 MT/ annum

State-of-the-art HDG baths having sizes

- Bath 1: L = 12.5m, W = 1.2m, D = 1.5m
- Bath 2: L = 12.5m, W = 1.2m, D = 1.5m
- Bath 3: L = 8.0m, W = 1.2m, D = 1.5m
- Bath 4: L = 8.0m, W = 1.2m, D = 2.0m
- Bath 5: L = 8.0m, W = 1.0m, D = 1.5m
- Bath 6: L = 12.25m, W = 1.0m, D = 1.0m