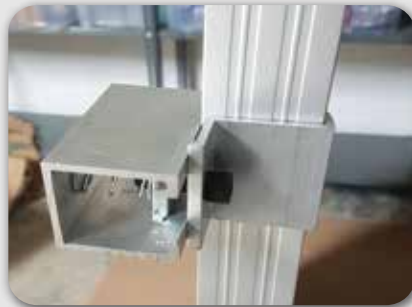


Hot Dipped Galvanized Solar PV Support Structure

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ABOUT RIM PROJECTS

RIM Projects Established in 2016 with an aim to provide quality product and services which can ensure safety, reliability and efficiency. We design our products and systems in such a way to ensure optimum use of resources. One reason why we work mainly in the field of renewable energy is that the company aims to have a sustainable relationship with the nature where no material is wasted. We work at a lean policy where we make sure that resources are managed thoughtfully. Resources include manpower, material and Energy which is utilised very carefully to help us to achieve more with less. Quality was another area of concern. Our company spent an year to test the products available in the market before coming into business. We never wanted to experiment with our clients. So we did product analysis and market requirement and only quality products which can perform equally well with all other parts of the systems are selected. We wanted to ensure that our customers enjoy trouble free life cycle with the products supplied by us. Even today the policy of evaluating new products before putting into business is followed in the company. Each Employee is made to work their way from the lowest level to their respective position to understand the organization and its activities. This ensures that each employee will get to know the product in detail, especially the sales Team, so that they can recommend the right product to our customers. We believe in maintaining customer relationship by providing right support, products and services. As a result 95% of our Client are doing regular business with us. That is our greatest achievement.

The stake holders have a decade of Experience in Renewable energy as an EPC contractor supplying Solar Wind Hybrid Power plants to Companies like British Gas, ONGC, ESSAR Offshore, L & T etc. RIM Projects was started to transfer the Experience that they gained from these project to domestic and Industrial Customers.

We are focussed on the following Products and Solutions.

1. Micro Grid
2. Hybrid Systems.
3. Zero Export.
4. DG Sync Systems and Fuel Savers.
5. EPC Solutions.
6. Distribution of Solar PV Panels. Inverters, and Balance of Plant components.
7. Engineering Consultancy
8. Manufacturing of AC DB Combiner Boxes.
9. Manufacturing of Electrical Panels, Control Panels, Instrumentation Panels
10. Manufacturing of Solar Panel Structures and Control Panel Structures.
11. Un manned Solar Power Plants for application in Remote areas.
12. Portable Power Plants.
13. Custom Solution

We are currently Channel Partners of the following Companies.

1. ABB Solar Inverters.
2. Trinity Touch
3. Siechem Cables
4. Giantlok Cable Ties.
5. Bonton Cables.
6. Victron Energy (Netherlands).

8. Panasonic Batteries.
9. CITEL Surge Protection Devices (France).
10. Excel Earthing
11. Exide Solar
12. Goldi Solar
13. Renewsys.
14. Panasonic Solar Panels.
15. Sunpower USA Solar Modules
16. Microsun Solar Modules.

Other Brands That We Deal Are

1. ABB Switch Gears.
2. C & S Switch Gears
3. Phoenix SPDs and Connectors
4. Connect Well.
5. Delta Inverters
6. Fronius Inverters
7. Goodwee Solar Inverters
8. Polycab Inverters
9. Solar Edge Inverters.
10. SMA Inverters.
11. Canadian Solar
12. Eaton Switch Gears
13. Fibox
14. Finolex Cables
15. L & T Meters
16. Genus Meters
17. Hensel Enclosures
18. Mersen Protective Devices.
19. OBO
20. Philips Street Lights
21. Phocos Solar Products.
22. Rittal Enclosure Solutions.
23. TE Connectivity

HOT DIPPED GALVANIZED STRUCTURE

What is Hot Dipped Galvanization?

Hot-dip galvanization is a form of galvanization. It is the process of coating iron and steel with zinc, which alloys with the surface of the base metal when immersing the metal in a bath of molten zinc at a temperature of around 449 °C (840 °F). When exposed to the atmosphere, the pure zinc (Zn) reacts with oxygen (O₂) to form zinc oxide (ZnO), which further reacts with carbon dioxide (CO₂) to form zinc carbonate (ZnCO₃), a usually dull grey, fairly strong material that protects the steel underneath from further corrosion in many circumstances. Galvanized steel is widely used in applications where corrosion resistance is needed without the cost of stainless steel, and is considered superior in terms of cost and life-cycle. It can be identified by the crystallization patterning on the surface (often called a "spangle")

OUR HOT DIPPED GALVANIZED SOLAR PV SUPPORT STRUCTURES



THE PROCESS

Once the design is finalized, we start the process with Fresh roll of Sheet metal. This ensures rust free and joint free product. The structure is made from Roll of sheet to avoid jointing of Rail. Jointing not only increases the chances of corrosion, but also decrease the strength of the structure. The Rolled sheet is cut to length and then Slots, and holes are made on the areas required. The slotted sheet is taken to the bending and forming process. Meanwhile the legs are welded separately as per design. The parts then undergo a thorough chemical cleaning process to get rid of greases, oils, rust and other impurities. The Cleaned parts are hot dipped. The galvanizing thickness that we follow normally otherwise specified is 80 Micron.

DESIGN BASIS

EASE OF ASSEMBLY

The Assembly of the Parts should be easy, and Holes and Slots are made in such a way that the parts won't fit unless assembled correctly.

RIGHT COMPONENT COMBINATION

All Hardwares and Made of Stainless steel to prevent corrosion and better strength.

EASE OF TRANSPORTATION

The Components are Separated in such a way to reduce Volumetric Weigh and to transport components with Minimum effort and damage.

MECHANICAL DESIGN

Designed to Withstand the maximum windspeed in respective areas of Usage. We have designed the structure in such a way as to avoid dirt getting on to the modules from rainwater splashing on the ground

4 PANEL HOT DIPPED GALVANIZED SUPPORT STRUCTURE

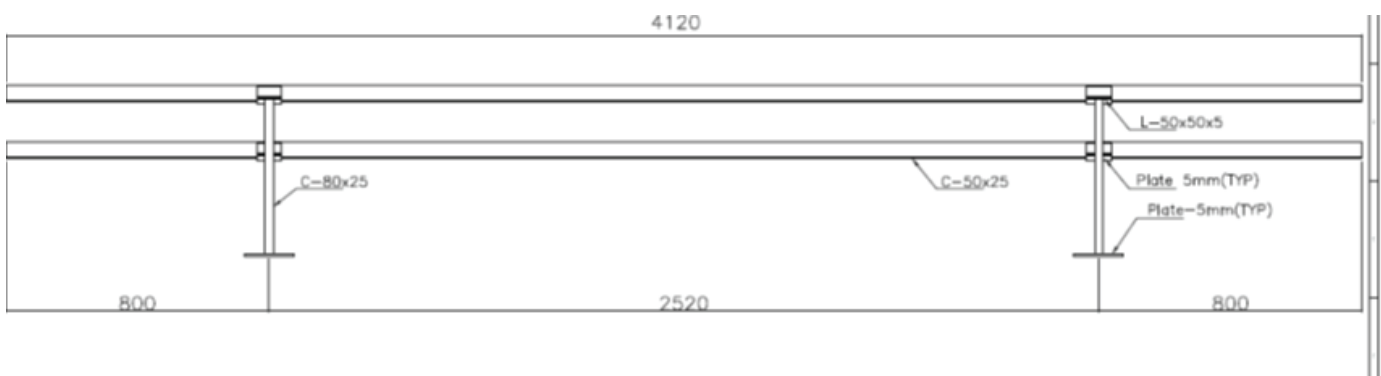
The Four Panel Support Structure has 4 Legs, 2 Long and 2 Short Legs and Two Purlins of 4.120M. The design is to accommodate 4 Panels in Portrait mode. The design angle of tilt considered generally 13 degree and can be modified based on custom requirement. Other dimensions will vary based on the angle of Tilt.

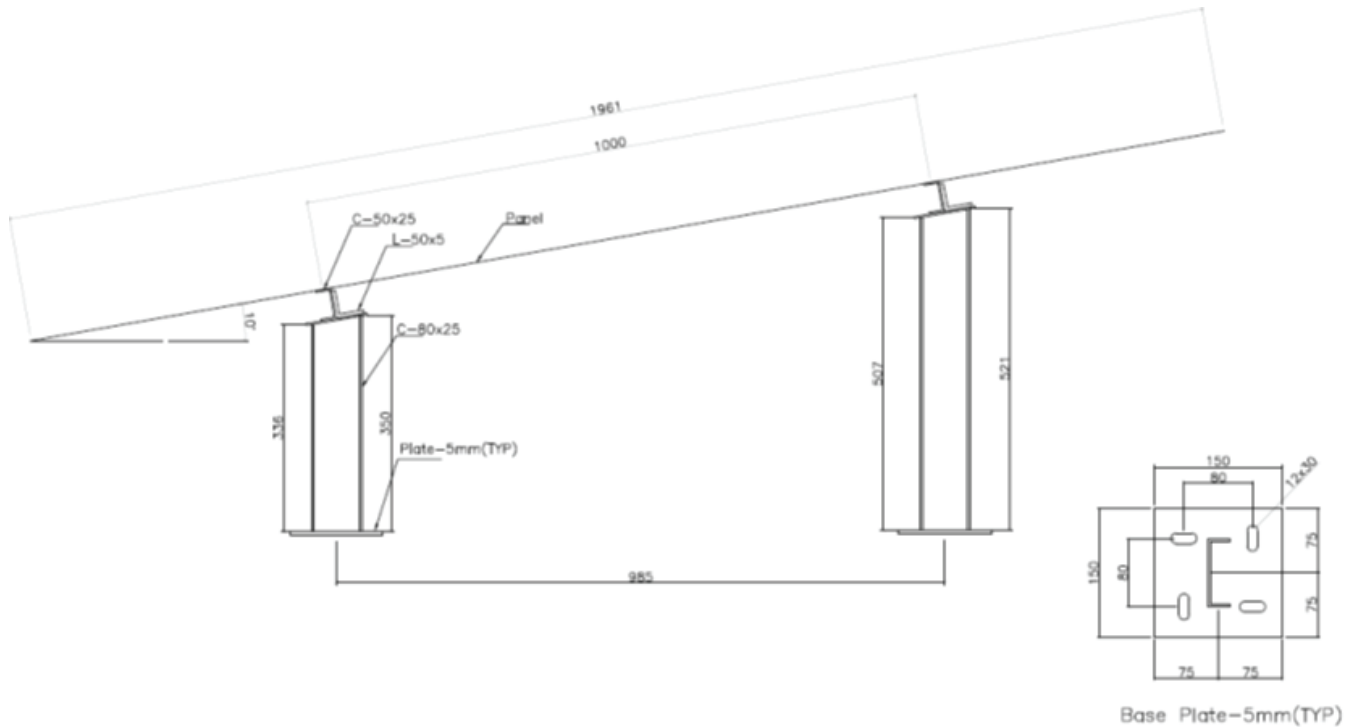
BILL OF MATERIAL

	Approx. Weight	Qty
PURLINS	10.1 Kg	2
LONG LEG	3.2 Kg	2
SHORT LEG	2.65 Kg	2
HARDWARE FOR STRUCTURE MOUNTING		
	Size	
SS BOLT	M10 X 25MM	8
SS PLATE WASHER	M10	16
SS SPRING WASHER	M10	8
SS NUT	M10	8
HARDWARE FOR PV MOUNTING		
	Size	
ALUMINIUM MID CLAMP	35mm	6
ALUMINIUM END CLAMP	35/40/42	4
SS ALLEN BOLT	M8 X 25mm	10
SS SPRING WASHER	M8	10
SS NUT	M8	10
SS WASHER	M8	10



DRAWING





MATERIAL SPECIFICATION

Thickness of Material is decided based on Load to be supported, The Dynamic wind Load and Aging. Necessary clearances are made to accommodate Thermal expansion of Material.

ITEM	PROPERTY
THICKNESS OF PURLINS AND LEG	2mm
THICKNESS OF PLATES	5mm
THICKNESS OF ANGLE SECTION FOR MOUNTING PURLINS	7mm
AVERAGE GALVANIZATION THICKNESS	Approx. 80 Micron
LENGTH OF PURLLIN	4120mm
LONG LEG- HEIGHT	579 mm
SHORT LEG- HEIGHT	394 mm

8 PANELS HOT DIPPED GALVANIZED SUPPORT STRUCTURE

BILL OF MATERIAL

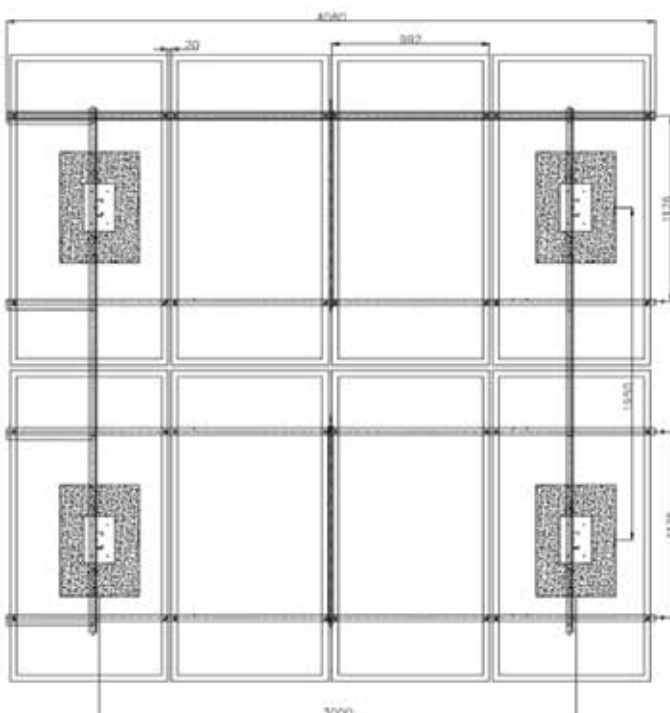
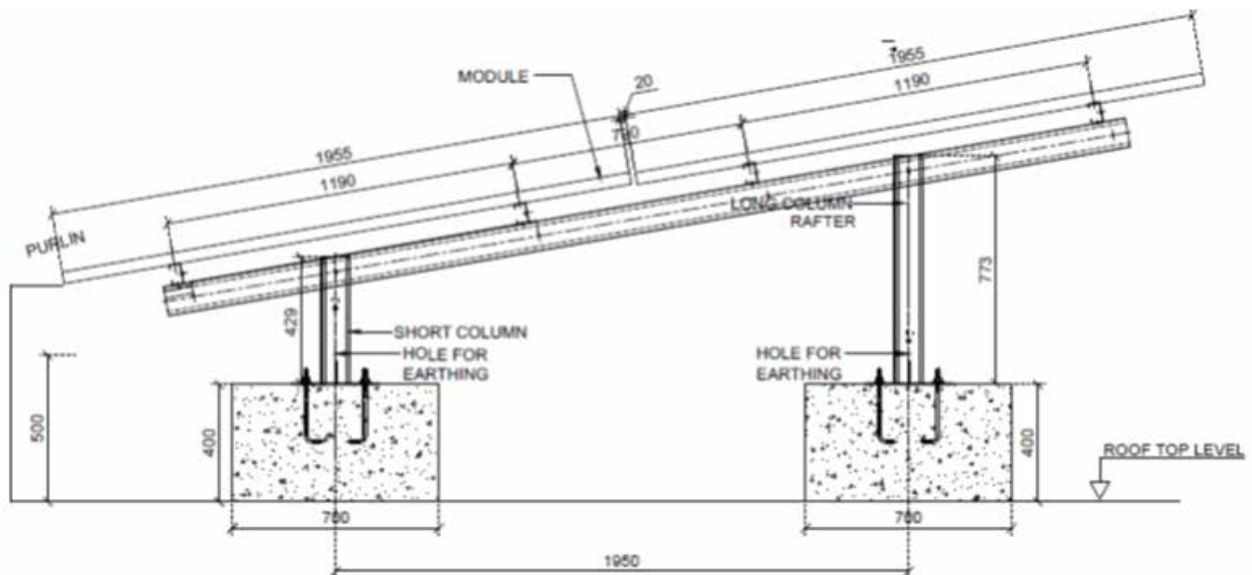
	Approx. Weight	Qty
PURLINS	10.1 Kg	4
LONG LEG	5.15 Kg	2
SHORT LEG	3.95 Kg	2
RAFTER	8.25 Kg	2
BEND	.2Kg	8



HARDWARE FOR STRUCTURE MOUNTING	Size	
SS BOLT	M10 X 25MM	20
SS PLATE WASHER	M10	40
SS SPRING WASHER	M10	20
SS NUT	M10	20
HARDWARE FOR PV MOUNTING	Size	
ALUMINIUM MID CLAMP	35mm	12
ALUMINIUM END CLAMP	35/40/42	8
SS ALLEN BOLT	M8 X 25mm	36
SS SPRING WASHER	M8	36
SS NUT	M8	36
SS WASHER	M8	36



DRAWING



MATERIAL SPECIFICATION

Thickness of Material is decided based on Load to be supported, The Dynamic wind Load and Aging. Necessary clearances are made to accommodate Thermal expansion of Material.

ITEM	PROPERTY
THICKNESS OF PURLINS AND LEG	2mm
THICKNESS OF PLATES	5mm
THICKNESS OF ANGLE SECTION FOR MOUNTING PURLINS	7mm
AVERAGE GALVANIZATION THICKNESS	Approx. 80 Micron
LENGTH OF PURLLIN	4120mm
LONG LEG- HEIGHT	773 mm
SHORT LEG- HEIGHT	429 mm
LENGTH OF THE RAFTER	2500 mm