

www.shribalajiroofing.com

**SHRI BALAJI
ROOFING**

**WE SPECIALISE IN
PRE-ENGINEERING BUILDING STRUCTURES**





SHRI BALAJI ROOFING

Established in 2011, SHRI BALAJI ROOFING, is a renowned manufacturer of Pre Engineering Building, Roof Sheets, Purlin, Decksheet & Retro fitting Service.

These products are of finest quality as we are using superior grade raw materials and the advanced production techniques. Buyers appreciate us for our strong wear resistance, durability, reasonable prices, dimensional accuracy and many other features.

For the delivery of quality products in market, we have setup a modern infrastructure. Our factory has the latest manufacturing machines, quality testing devices and packaging machines, essential for carrying out different business operations smoothly. All production and post-production work processes are carried out reducing wastage and operational costs. As a result, a superlative range of defect-free products reach the market. Our products are available in various sizes that suit the customers' diverse needs. Moreover, we price our products reasonably and offer them at the competitive prices. Due to which, our products are availed by several customers. Our products are demanded by various construction sites, power plant buildings, high-rise buildings, offices etc. Along with products, we also offer Pre Engineering Building Services and Retro Fitting Service Services, as a service provider. It is owing to our quality services and products, our company has been successful in attaining a prominent position in the market in such a short span of time.

Why Us

We are Passionate

We have a proven record of accomplishment & a reputable company in the India & Overseas. We ensure that all projects are done with utmost professionalism using quality roofing materials while offering clients support & accessibility



Honest & Dependable

For us, Honesty is the only policy & we strive to complete all projects with integrity, not just with our clients, but also our suppliers & contractors. With many of successful projects under our belt, we are one of the most trusted Roofing companies in India.



We are Always Improving

We commit ourselves to complete all projects within the timeline set with our clients. We use the best of technology & tools to ensure that all jobs are done quickly but also giving attention to details & ensuring everything is done correctly



Our Mission

We Provide excellent products and services that offer exceptional value for money. We are dedicated to provide unequalled customer service that distinguishes us from others.

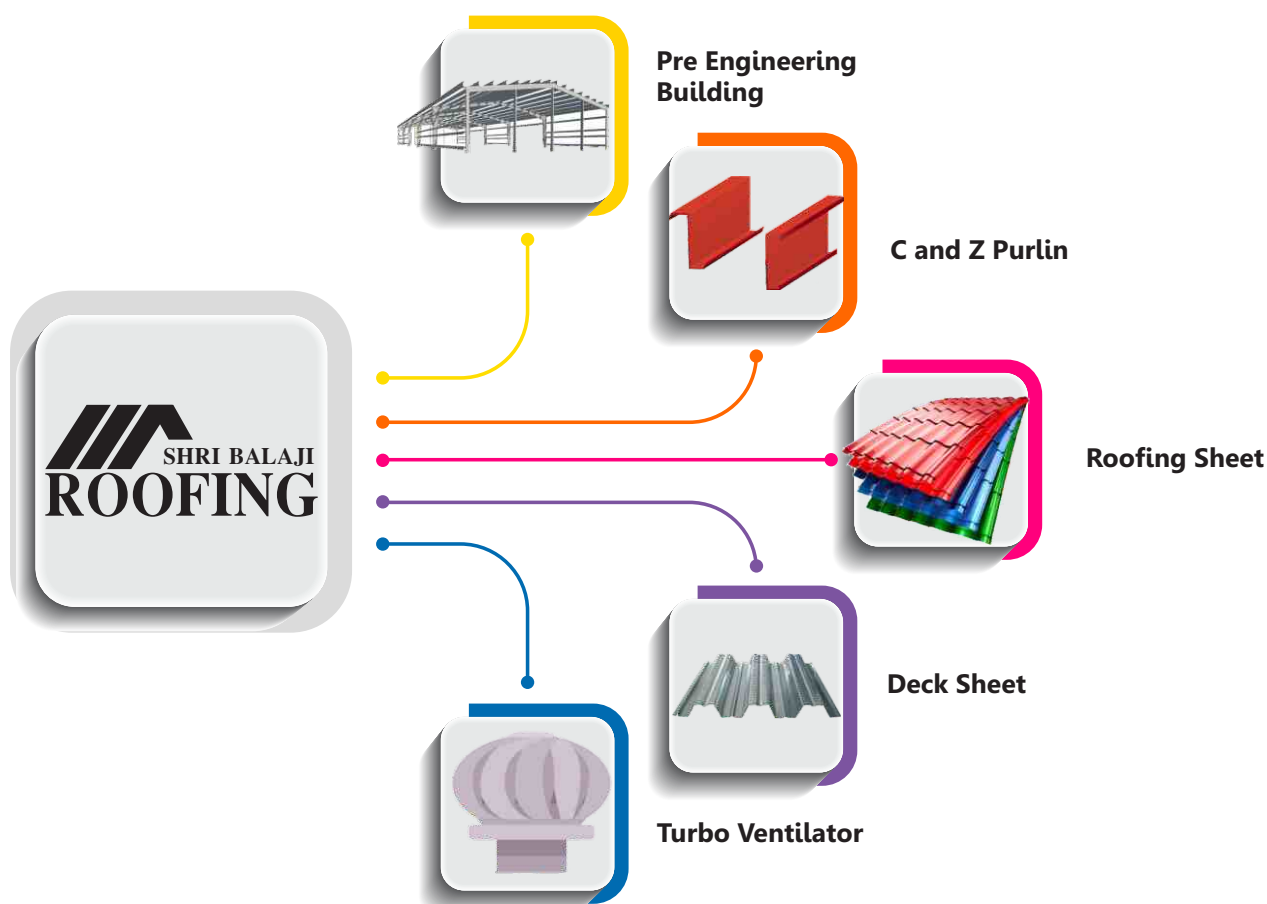


Our Vision

To provide innovative and quality products to our valuable customers to earn their complete satisfaction and loyalty.



AREAS OF EXPERTISE



Our Valuable Clients



Application Area

- Airport • Metro/Railway • Thermal Power Plants • Automobile Industry • Warehouse
- Industrial Shed • School Buildings • Power Plants • Pharmaceutical

ADVANTAGES

Reduce Construction Time:

Due to the system approach, the use of high strength steel, use built-up sections which optimized by the computerized program and the use of continuous light weight secondary steel section, there is an overall reduction in steel weight, cost and time relative to conventional steel construction.

Design:

Since pre-engineered steel buildings (PEBs) are mainly formed of standard sections and connections, the design time is significantly reduced, specialized computer analysis custom details, the light weight flexible frames offer higher resistance to seismic forces.

Foundations:

Pre-engineered steel buildings are about 50% lighter than the conventional steel structures, hence, the foundations are of simple design, easy to construct and lighter.

Erection:

All components are standard like the LEGO. The erection time is faster.

Flexible of Expansion:

Buildings can be easily expanded in length by adding more bays, also, expansion in width and height is possible by pre-designing for future expansion.

Large Clear Spans:

Buildings can be supplied to around 90m clear spans.

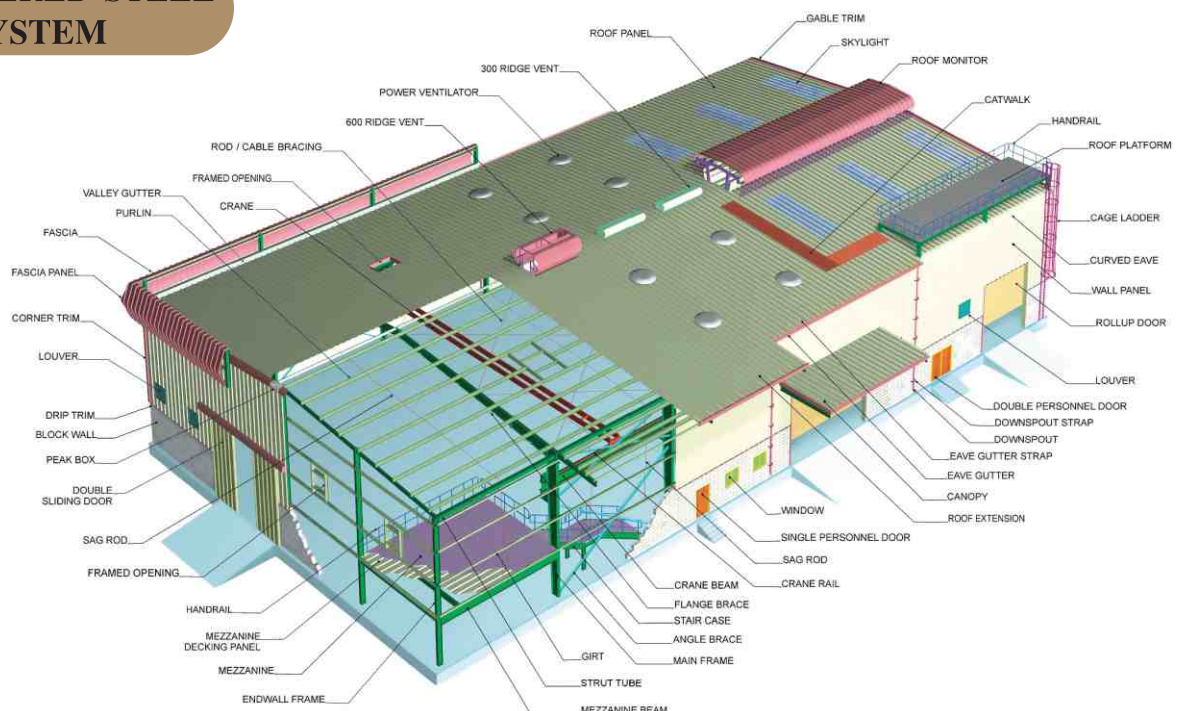
Energy efficient roof and wall systems:

Buildings can be supplied with polyurethane insulated panels or fiberglass blanket insulation to achieve required "U" values.

Lower Cost:

Due to the systems approach, there is a significant saving in design, manufacturing and site erection cost, the structural elements are shaped to follow the stress diagram of the member, thus reducing weight, cost and load to foundations, the secondary members and cladding nest together reducing transportation cost, the overall price per square meter may be reduced as much as 30% lower than conventional steel.

PRE ENGINEERED STEEL BUILDING SYSTEM



PARAMETERS & PRIMARY FRAMING SYSTEMS

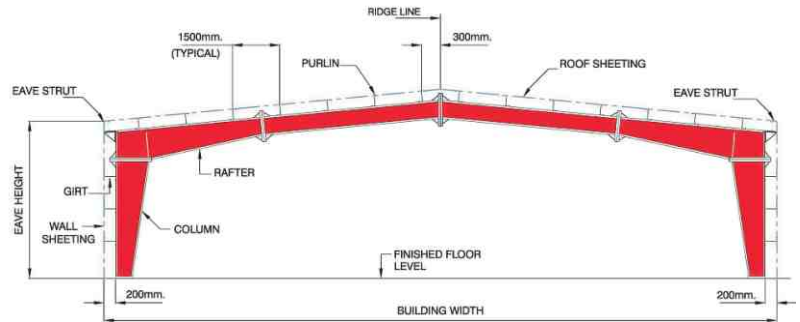
Building Length

It is advisable to keep all bay lengths equal. If this is not possible, maintain all interior bays equal and the end bays equal but shorter than the interior bays

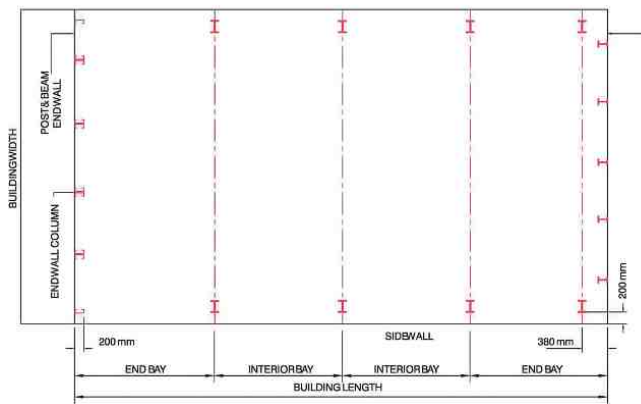
Building Width:

Since the roof purlins are at 1500mm c/c spacing make the building width a multiple of 3M.

Shri Balaji Roofing Pre-Engineered Steel Buildings are designed by our architects solely with customer requirements in mind and within the parameters of the pre-engineered structures. Our basic architectural measures include:



FRAME CROSS SECTION



ANCHOR BOLT PLAN

Building Width is the distance from the outside of eave strut of one sidewall to the outside of eave strut of the facing sidewall.

Building Length is the distance between the outside flanges of endwall columns in facing endwall.

The End Bay Length forms the distance from the outside of the outer flange of endwall columns to the center line of the first interior frame columns.

The Interior Bay Length is measured as the distance between the center lines of two adjacent interior main frame columns which usually range from 6m, 7.5m and 9m to 15m.

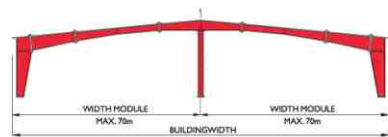
The Building Height forms the eave height, which is the length from the foot of the main frame column base plate to the top outer point of the eave strut and can measure up to a height of 30m. In the case of columns that are recessed or elevated from finished floor, the eave height is the distance from finished floor to top of the eave strut.

The Roof Slopes, of thick any practical ones can be constructed by our architects, is the angle which the roof forms with respect to horizontal and are commonly 0.5/10 and 1/10.

Shri Balaji Roofing has minimum roof live design load of 0.57kN/m² and design wind speed of 110km/hr which are applicable in keeping with American codes.



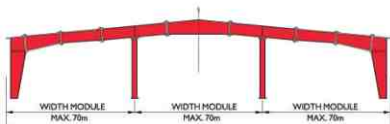
CLEAR SPAN (CS)



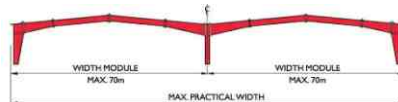
MULTISPAN "1" (MS-1) (1 Interior Column)



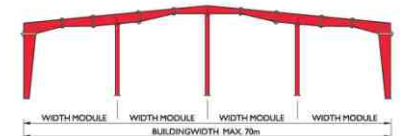
(Roof System)



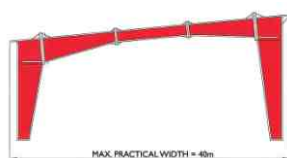
MULTISPAN "2" (MS-2) (2 Interior Column)



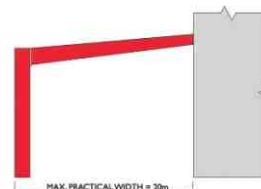
MULTI GABLE (MG-1)



MULTISPAN "3" (MS-3) (3 Interior Column)



MONO SLOPE



LEAN-TO (LT)

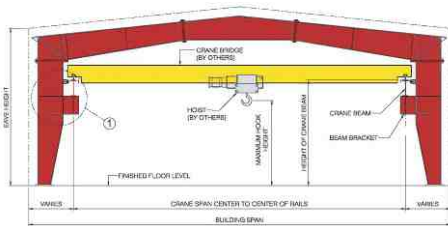
Two out of every five metal building systems are constructed for manufacturing facilities where cranes are frequently needed for material handling. Our building can be designed to support any required crane system. Overhead travelling cranes up to 15 metric tonnes are supported on brackets. Higher capacities are usually supported by an independent support system.

A building crane is a complex structural system which consists of the actual crane with trolley and hoist, crane rails with their fastenings, crane runway beams, structural supports, stops, and bumpers. A motorized crane would also include electrical and mechanical components.

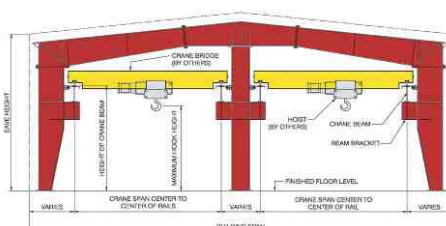
We do require the customer's complete crane system information in order to design and estimate buildings with cranes.

The costs involved in adding a crane system to a metal building consist of:

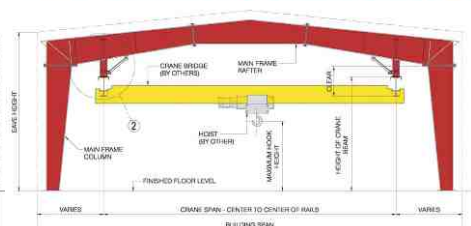
1. Strengthening the building's main frame to support the crane loads.
2. Supplying the crane brackets and crane runway beams that support the crane system
3. Supplying and installing crane rails.
4. Supplying, installing and commissioning the crane system.



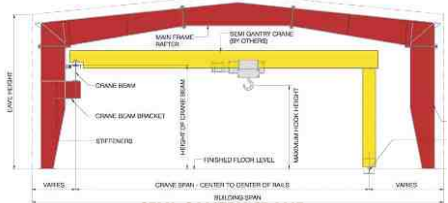
TOP RUNNING CRANE IN A CLEAR SPAN BUILDING



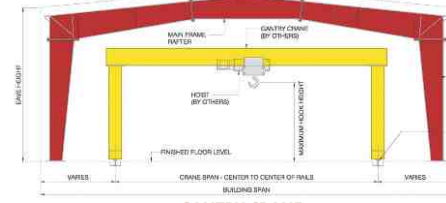
TOP RUNNING CRANE IN A MULTI-SPAN BUILDING



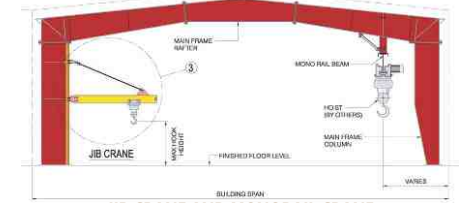
UNDERHUNG CRANE



SEMI-GANTRY CRANE



GANTRY CRANE

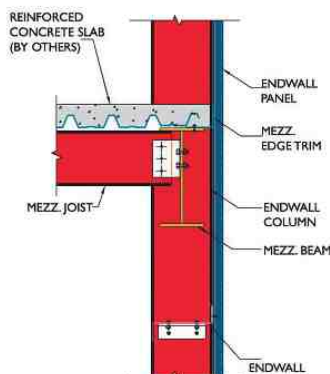
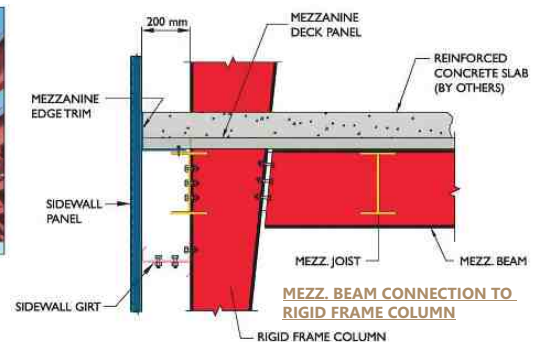
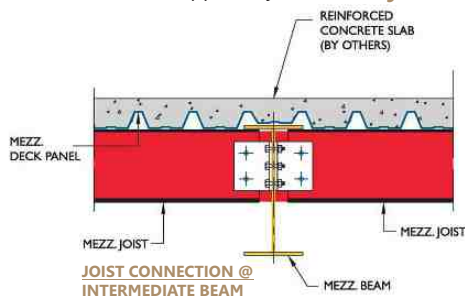


JIB CRANE AND MONORAIL CRANE

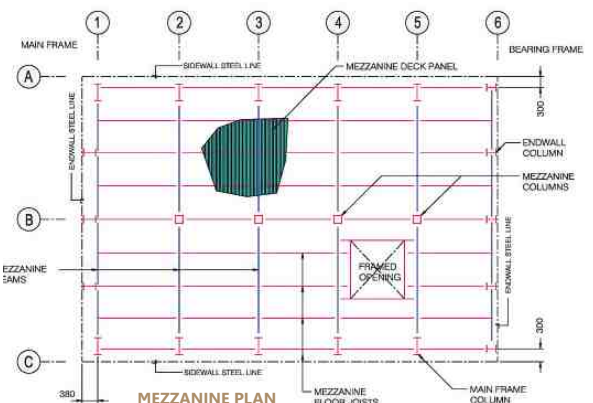
MEZZANINES

When required by design loads, the main beams shall also be supported by intermediate columns. The primary mezzanine beams usually run across the width of the building and the joists usually run lengthwise (parallel to the roof purlins). The Economy of a mezzanine system depends on the applied loads such as dead load, live load and collateral load.

Our standard Mezzanine floor systems consist of Galvanized Steel Decking Supported by joists framed onto main mezzanine beams. A reinforced concrete slab (not Supplied by **Shri Balaji Roofing**) in cast in situ on top of the metal deck with some floor finishes



JOIST TO BEAM CONNECTION @ END WALL

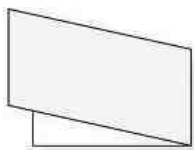


Material Specification for Pre Engineering Building

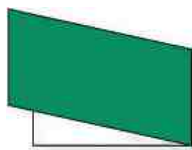
SR.NO	ITEM	SPECIFICATION
1	PRIMARY MEMBERS	ATSM A 572 OR IS 2062, E350
2	SECONDARY MEMBERS	IS 277 / 180-275 GSM -345 MPA
3	ANCHOR BOLT	IS 2062
4	HARDWARE	IS - 1367/ ASTM A 325 (GRADE : 4.6 & 8.8)
5	TUBULAR SECTION	IS 1161 : 1998/ YST 240
6	SHEET COILS	ASTM A 792 / IS 277 : 2003 (ALU ZINC)
7	CLADDING SHEET COILS	ASTM A 792 / IS 277 : 2003 (ALU ZINC)
8	SHEETING FASTNERS	ASTM D 2240 /ASTM D 412/ ASTM D 573

SR.NO	ITEM	SPECIFICATION
9	POLYCARBONATE SHEET	ASTM D 1003
10	GLASSWOOL INSULATION	IS 8183
11	ROCKWOOL INSULATION	ASTM E 84
12	AIR BUBBLE INSULATION	ASTM C 1371
13	FOAM CLOSURE	CROSS LINK POLYTHYLENE
14	PVC PIPES	IS 4985 (6 KG ISI)
15	PUF PANEL	IS 14246 : 1995/ IS 12436 : 1988

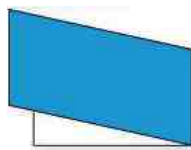
STANDARD COLORS



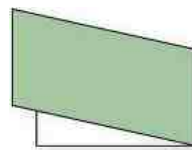
Off White



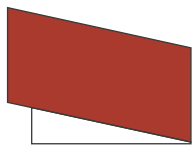
Traffic Green



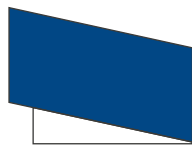
Light Blue



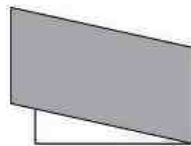
Mist Green



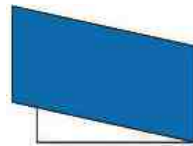
Brick Red



Torres Blue

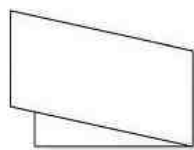


Dark Grey

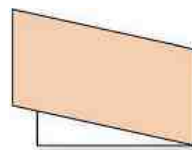


Sky Blue

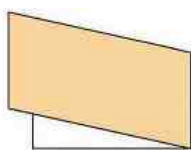
NON STANDARD COLORS



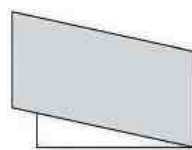
Pure White



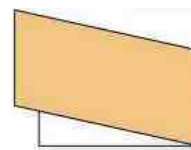
Light Ivory



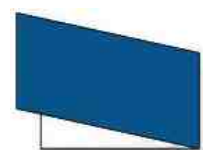
Ivory



Light Gray



Beige



Gentian Blue

Sundry Items



Double Tape & Patching Tape



Stapler & Staples



Hillside Washers



Fasteners



Anchor Bolts



Bolts with Nuts & Washers

Printed color samples shown above are only for illustration.
actual colors may differ.
* Non standard colors will be charged extra and may have longer delivery times.

DECK SHEET



Shri Balaji Deck is used as composite floor system. The steel deck profile sheet has a ribbed profile with embossment to interlock with concrete slabs, creating a reinforced concrete slab that serves dual purpose of permanent form and positive reinforcement.

✓ **Economical Alternative**

An efficient alternative for multi storey buildings. With steel deck simultaneous casting of multiple floors possible.

✓ **Forget Conventional Shuttering**

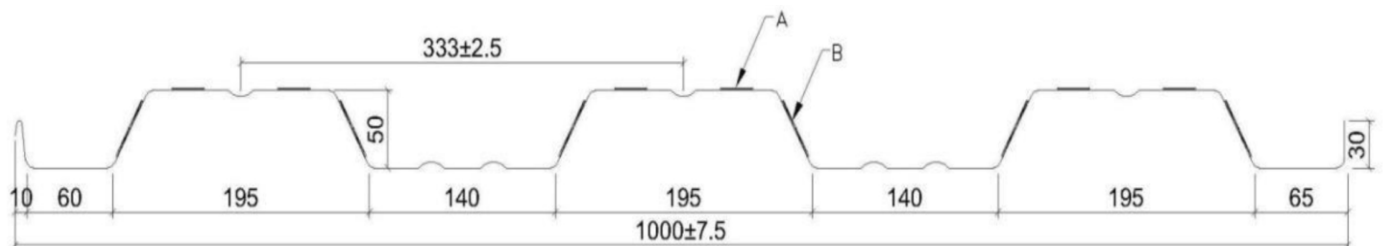
Steel deck is stronger and easy to install than conventional shuttering. It saves project time, eliminates shuttering and de shuttering planks and other props which gives more space to work under the rcc floor.

✓ **Reduce Cost**

Steel deck reduces the concrete thickness and the reinforcement which results into floor to floor clear height. Besides it, steel deck economizes concrete and steel consumption which reduces project cost dramatically.

Shear Connection in Composite Beams

Shear Connector Studs are designed to tie the concrete slab to the steel beams and to resist shear loadings between the concrete slab and steel beam in composite construction. The Shear Stud is made of steel and it is delivered with a ceramic ferrule to ensure a good connection of the Stud with the beam. The Shear Studs are available in different lengths and diameters. The length of the Stud will be reduced by approximately 5mm during the welding process. The ferrules are made of clay and able to withstand heat shock as well as high temperatures without melting or breaking.

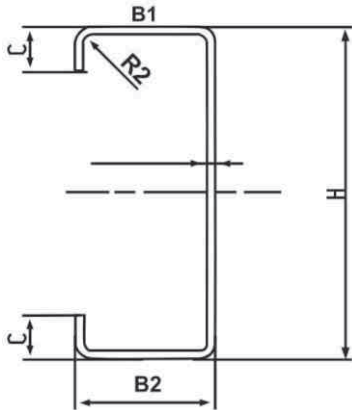


“SBR DECK”

LOAD TABLE FOR SBR- DECK									
SPAN WISE LOAD CARRYING CAPACITY (KG/M)									
DEFLECTION LIMITS-L/180									
YIELD STRENGTH		240 Mpa				350 Mpa			
THICKNESS		0.6mm	0.8mm	1mm	1.2mm	0.6mm	0.8mm	1mm	1.2mm
SPAN	SPACING								
SINGLE SPAN	1	883.2	1426	2036.5	2667.7	1095.4	1824.1	2601.7	3459.9
	1.2	603.3	980.2	1404.2	1842.6	750.7	1256.7	1796.7	2392.7
	1.4	435	711.9	1023.4	1345.4	543.2	915	1311.7	1749.6
	1.6	326.1	538.1	775.6	1023.1	409	693.6	997.3	1332.6
	1.8	251.1	419.2	607.7	802.5	317.2	542.1	782.1	1047
	2	198.8	334.5	487.1	644.9	251.8	434	623.7	800.6
DOUBLE SPAN	1	805	1323.2	1857.3	2395.8	995.9	1680.6	2422.6	3174.7
	1.2	564.1	929.1	1315.3	1705.3	701.7	1185	1708.6	2250
	1.4	443.3	683.7	974.7	1269.2	515.6	876.5	1236.7	1671.8
	1.6	313.1	521.4	746.9	977.6	392.5	670.3	968.2	1285.6
	1.8	243.5	408.7	588.9	773.6	306.8	527.3	763.8	1017.4
	2	193.4	327.5	474.7	625.2	276.31	424.2	616.3	823.4
MULTI SPAN	1	924.2	1521.8	2125	2730.1	1141.4	1927.9	2783.5	3633.2
	1.2	653.2	1075.7	1515.6	1958.2	810.7	1369.7	1974.6	2591.6
	1.4	481.6	796.7	1128.9	1466.4	600.6	1017.2	1466.5	1933.2
	1.6	367.3	609.3	868.9	1133.5	458.9	780.9	1127.4	1492.7
	1.8	287.3	479.4	687.5	900.1	360.5	616.6	891.7	1184.5
	2	229.4	385.6	555.8	730.2	289.2	497.6	721.3	960.8

Standard Purlin Section C-Section: YS-245 MPa & 345 MPa

Purlins are generally available from 100 to 300 mm depth/height and 45 to 75 mm wide in several thickness with downturn lips (flanges)

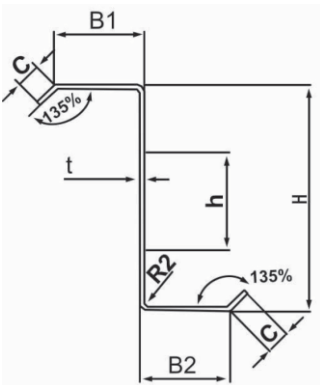


Size	H	B1	B2	C	T
C80	80	40	40	15-20	1.5 to 3.0
C100	100	50	50	15-20	1.5 to 3.0
C120	120	50	50	15-20	1.5 to 3.0
C150	150	60	60	15-20	1.5 to 3.0
C180	180	60	60	15-20	1.5 to 3.0
C200	200	60	60	15-20	1.5 to 3.0
C220	220	70	70	15-20	1.5 to 3.0
C250	250	75	75	15-20	1.5 to 3.0

All dimensions are in mm*

Standard Purlin Section Z-Section: YS-245 MPa & 345 MPa

Purlins usually delivered with holes punched at any position on the web & flange as required, this facilitates supplied material to be ready to use on site arrival thus saves time. Capsule Punching dimension: 18mm X 24mm. Round Punching dimension: 14mm X 24mm



Size	H	B1	B2	C	T
Z 120	120	60	55	15-20	1.5 to 3.0
Z150	150	60	55	15-20	1.5 to 3.0
Z180	180	70	65	15-20	1.5 to 3.0
Z200	200	70	65	15-20	1.5 to 3.0
Z250	250	80	75	15-20	1.5 to 3.0
Z280	280	80	75	15-20	1.5 to 3.0
Z300	300	80	75	15-20	1.5 to 3.0

All dimensions are in mm*

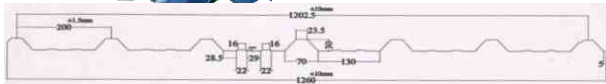
Roofing & Cladding Sheet Shri Balaji P1000



In the past few years, it has been found; the roofing industry has come up with many changes and advancements. The demand for roofing sheet manufacturers in the Indian market is continuously growing because of industrial applications.

Roofing Metal sheets available in following mention material

- Galvalume: Bare & Colour Coated
- Galvanised: Bare & Colour Coated
- Aluminium: Bare & Colour Coated
- Zinc: Natural & Weathered

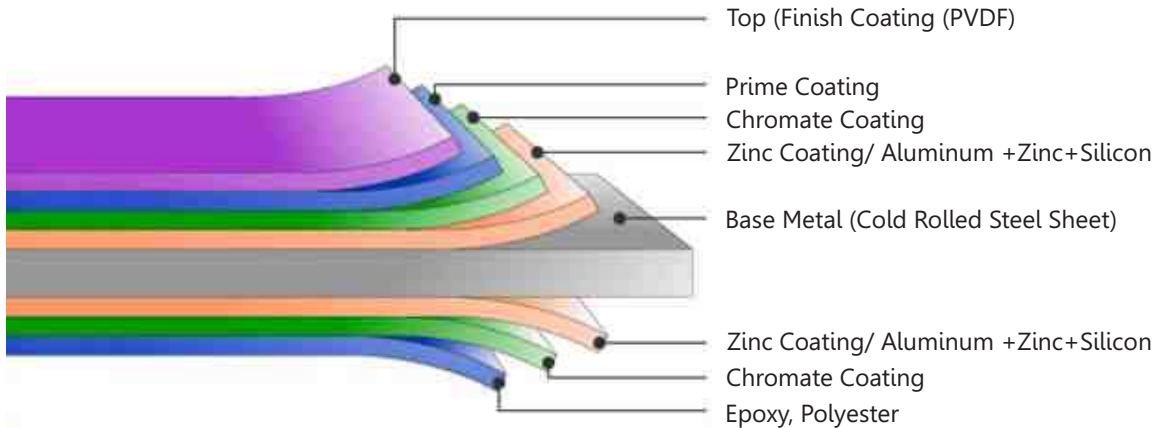


Shri Balaji Hi-Rib Profile

Technical Specifications For 300/ 550 MPA	
Supply Width	1220 mm (± 20 mm)
Covered Width	1000 mm (± 10 mm)
Pitch	200 mm (± 3 mm)
Crest Height	30 mm (± 2 mm)
Crest Width	23.5 mm (± 1 mm)
Total Width	1.06 MTr

Technical Specifications For 300/ 550 MPA	
Supply Width	1450 mm (± 20 mm)
Covered Width	1220 mm (± 10 mm)
Pitch	200 mm (± 3 mm)
Crest Height	30 mm (± 2 mm)
Crest Width	23.5 mm (± 1 mm)
Total Width	1.260 Mtr

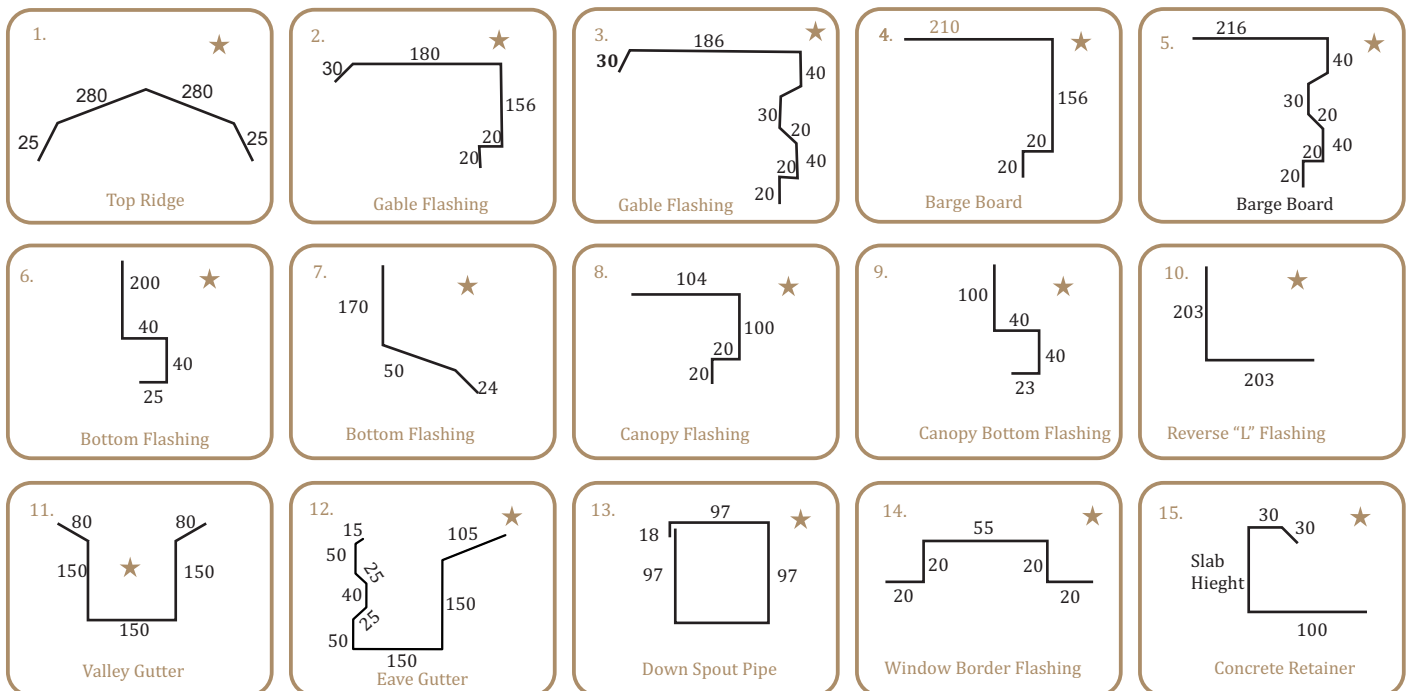
Roof Sheet Color Coating System



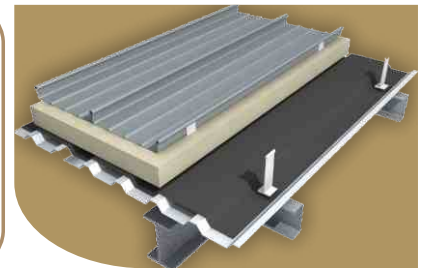
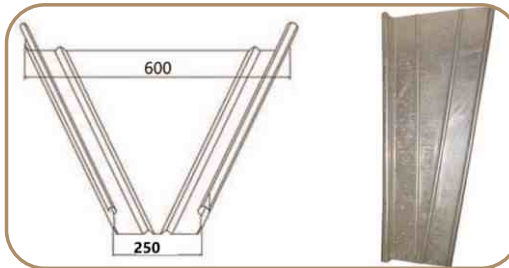
Material Specification

Details	MATERIAL RANGE		
	Bare Galvalume	Colour Coated Galvalume	Pre Painted Galvanized
Combination	55%AL 43.4%ZN & 1.6%SI	55%AL 43.4%ZN & 1.6%SI	99.5% ZN
Coating Std	AS 1397-93	AS 1397-93	AS PER IS 277
Material	Bare Galvalume-ASTM A792M	CCGL	C.C.Galvanized
Coating Mass	AZ 150 gsm	150 gsm / col:18+020u, 150-180-275	120 gsm / col:18-20u
Base Metal	High Tensile / CR	High Tensile / CR2S	High Tensile & Soft Material/ CR
Nominal Thickness(TCT)	0.47TCT & 0.50TCT & 0.60TCT AS/NZS -1365-96	0.40TCT, 0.47TCT, 0.470 0.50TCT, 0.54TCT & .0.80TCT	0.35TCT, 40TCT, 0.50TCT & .080TCT
Yield Strength	550Mpa	550Mpa	240, 300 & 550Mpa
Paint		Regular modified polyester system Silicon modified polyester system Super durable paint PVDR Coating	Regular modified polyester system Silicon modified polyester system Super durable paint PVDR Coating

Roofing Accessories



Standing Seam Metal Roofing System



Advantages of Standing Seam Metal Roofing

✧ Concealed Fasteners

Concealed fasteners are one of the biggest advantages of standing seam roofing systems. In exposed fastener systems, the washer around the screw is made of neoprene material. Over time, sun can degrade the washer material and cause shrinking or cracking. When this phenomenon occurs, water can penetrate the building around the fastener/washer. The only correction for this is to back out all the screws and insert new oversized screws. Since there are no exposed screws with standing seam panel systems, they are considered a much more weather tight system.

✧ Expansion/Contraction through Clip or Slotted Flange System

Standing seam systems allow for expansion/contraction through either a clip or slotted flange system. Steel expands in heat and contracts in cool temperatures and will literally move on the roof. Exposed fastener systems, while less expensive to install, do not allow for expansion and contraction. In longer panel runs, the screws can wallow out on exposed fastener systems and allow water to penetrate the building around the fastener.

The clip in standing seam systems allows the panel to float from eave to ridge to accommodate the phenomena of expansion and contraction.

✧ On-Site Panel Production For Long Lengths

While not available with every manufacturer, some of the major manufacturers have the ability to produce some standing seam panels on-site in lengths up to 70 meter. Single piece panels are quicker to install because the lap details required to join multiple shorter length panels are generally very time consuming for installation crews. In addition lapped systems often require additional parts and pieces which can further drive up the cost over continuous job site produced panels. Lastly, the weakest link in any roofing system is a lap so when one can be avoided it's generally preferred.

✧ Aesthetics

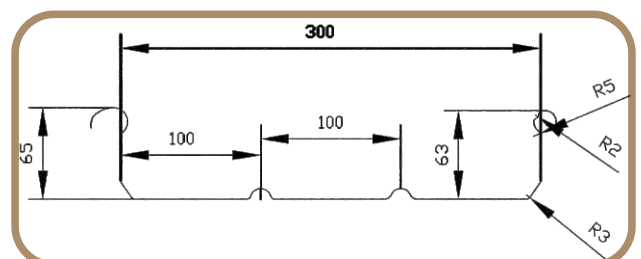
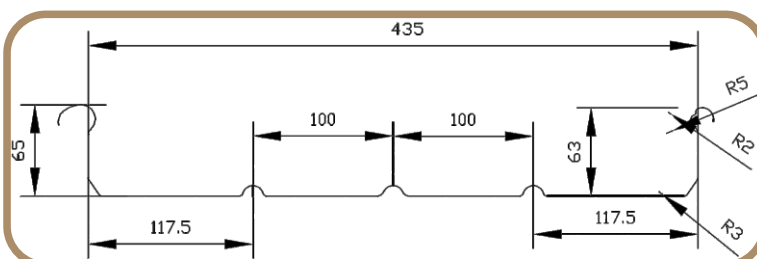
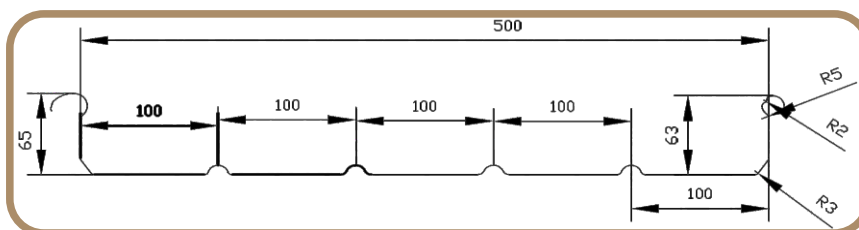
Aesthetics. Standing seam panels typically offer a taller and distinct vertical leg and fewer (if any) minor ribs in the center of the panel. This tall vertical leg can offer a nice shadow effect and the illusion of a flat pan in between the major ribs which many architects and building owners prefer.

✧ Extensive Testing

In order to meet demands of the architectural community, building codes and life safety issues, standing seam panels are subjected to more testing than exposed fastened type systems. Common tests include those for uplift, air and water, impact and fire resistance.

✧ Availability of Weather Tightness Warranties

While certainly not required, some building owners want assurance that their building will be leak free for perhaps up to 20 years. While there are additional charges and criteria to be met, standing seam systems can often offer Weather Tightness Warranties where exposed fastener panel systems cannot.





SHRI BALAJI ROOFING

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