



The Pioneer of Pre-Engineered
BUILDING SOLUTION



INFRA 93 INDUSTRIES



GeM
Government
e Marketplace



MSME
MICRO, SMALL & MEDIUM ENTERPRISES
सुष्म, लघु एवं मध्यम उद्यम

WE ARE

We specialize in Pre - Engineered Metal Building System (PEB) and expert in manufacturing, supply and execution. Highly skilled engineering teams with international software carry out design and detailing works. Design department having good experience and expertise in steel buildings use fully optimized techniques keeping up with computer aided design & drafting facilities using the Indian & International design codes & specifications of PEB.

We understand the actual need of our customer & provide complete solution for designing, manufacturing & installation of PEB till completion of project. We provide cost effective solutions, which are sound, leak proof & give a contemporary look to the Factory I Warehouse. We have successfully completed more than 2000 PEB buildings. We provide complete peace of mind related to design, supply and executions. We are an ISO certified company & always look for customer satisfaction & fulfill of commitment to our clients.



OUR MISSION

To design, supply and erect very reliable and economical steel structures for our prestigious customers by providing best customer services, realization of commitments and highest standards of professionalism but at the same time contributing to the industry through innovative engineering designs, state of the art production facilities, human safety measures and environmental protection.

OUR VISION

To be one of the most prestigious & trustworthy steel buildings supplier and turnkey project provider in India by 2020 to be achieved by exceptional customer services, highest standards of product quality & cost effective building solutions.



OUR SERVICES

Innovative Concepts

We help our customers to decide about the optimized geometry of the building considering the functionality, future expansion and utility keeping in mind the budget of the project.

Design of Steel Structure

We are experts in the design of Pre-Engineered, Hot Rolled and Light Gauge Steel Buildings. We use latest software's to generate economical and safe designs for Pre-Engineered Steel Buildings. Our engineering department is lead by the best structural engineers in the design industry. Our quotations are presented in the form of comprehensive proposal offers with detailed 20 drawings & 30 images. Our aim is to provide the best economical solution as per customer requirements.

Supply of Steel Structure

Since its inception, INFRA 93 has met contractual delivery commitments for site delivery over 97% of the time. Although our standard delivery (dispatch of materials) period is 8 weeks, we have actually achieved SIX weeks delivery for 75% of our projects.

Erection of Steel Structures

It is always great advantage for a customer to have installation of the steel structure done by supplier in order to achieve accuracy and cost effectiveness. INFRA 93 offer a complete supply and erection solution to all of its local and international prestigious customers. We have highly skilled and qualified erection staff which includes erection managers, supervisors 8. erection specialists / supervisors. Infra 93 ensures that the building is delivered to customer without any discrepancy in materials and installation.

Project Management

INFRA 93's team of experienced project managers and project execution team have the ability to manage a project from inception to completion. All of our experience Project managers have international experience to handle the myriad of different instances as they arise.

LEADING PROVIDER OF
CONSTRUCTION SERVICE



WE ARE EXPERT OF CONSTRUCTION

Through its experience, innovation and adherence to latest development in the steel industry INFRA 93 has developed its expertise and services in a wide range of building structures which encompasses all major sectors as given below:

Industrial

- Factories
- Warehouse
- Power plants
- Fertilizers

Educational

- Schools
- Universities
- Libraries
- Hostels

Residential & Commercial

- Multi Storied
- High rise buildings
- Shopping Malls
- Office Building
- Showrooms
- Light Gauge Villas

Military

- Vehicle Maintenance
- Training Buildings
- Hangars
- Generator Building
- Mock -up Building

Infrastructure

- Bridges
- Airports
- Seaport

Sports and Entertainment

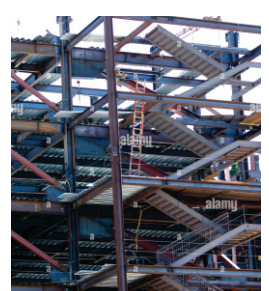
- Stadiums
- Gymnasiums
- Sports complex

Live Stock

- Poultry farms
- Catties/Camels/ Cow yards
- Slaughter house

Telecommunication Towers

- Tower Structure
- IDU/ODU sheds
- Cable Trays
- Miscellaneous Items





PROCESS OF PEB CONSTRUCTIONS

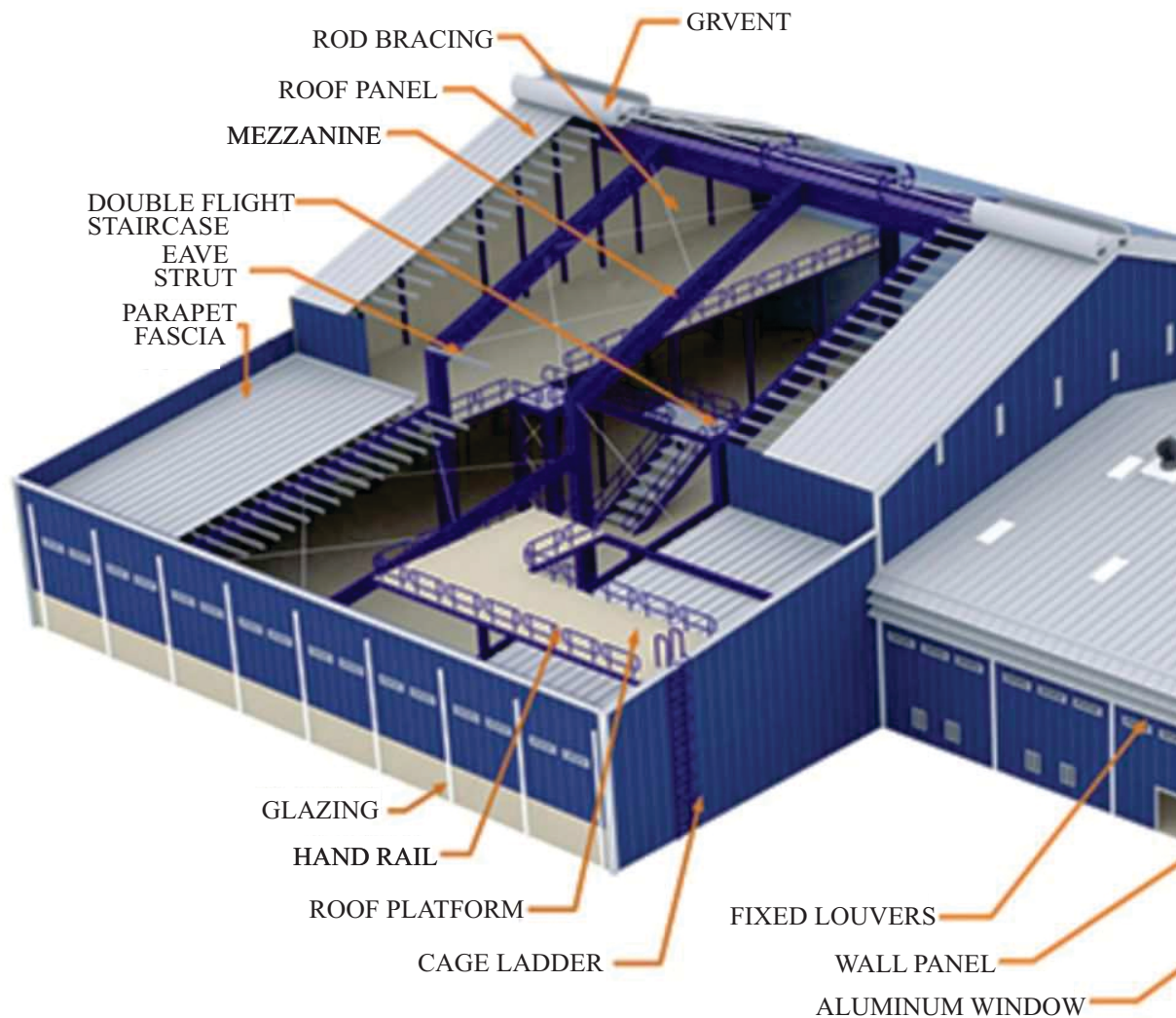


INFRA 93 is committed to comply with the latest editions, supplements and addenda of the following U.S. codes in the analysis, design and fabrication of Hot Rolled Steel Structures. Our designers extensively used world best technological software STAADPRO which is best suited engineering & analysis software used for optimal section design. Steel structures are engineered as per IS, IBC and other international codes & guidelines. Flexibility to offer built-up, tubular, pipe, box section, H-beam or other hot rolled section depending upon design need and customer requirement. We offer steel structure in all grades of steel ranging from 245 MPA Ys to 550 MPA Ys in all available sizes and shapes.

We used below codes for steel design

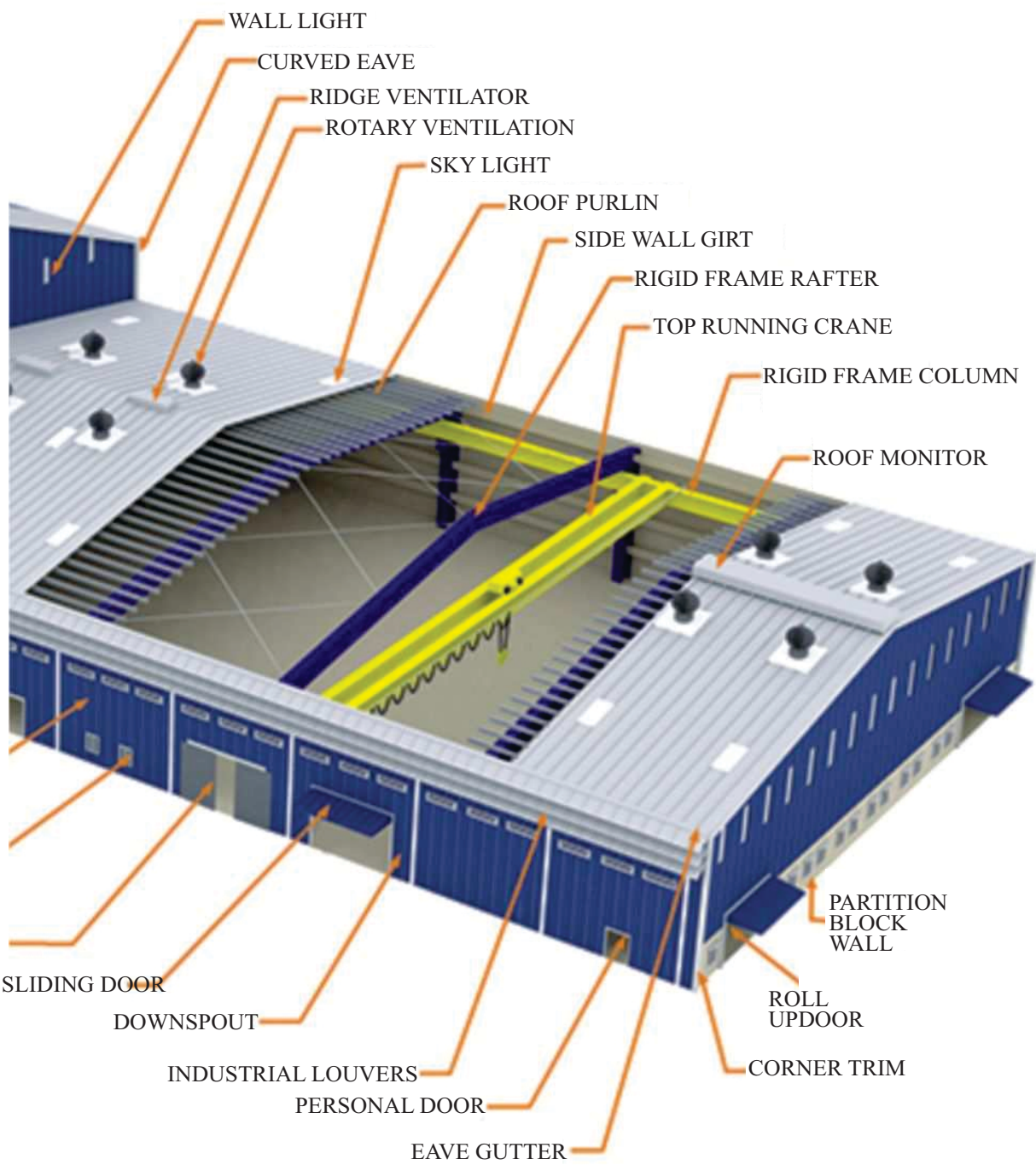
| | | |
|------|---|--|
| AISC | : | American Institute of Steel Construction Manual. |
| AISI | : | American Iron and Steel Institute |
| MBMA | : | Metal Building Manufacturer's Association |
| Labs | : | Low Rise Building Systems Manual. |
| ANSI | : | American National Standards Institute |
| ASCE | : | American Society of Civil Engineers |
| UBC | : | Uniform Building Code |
| IS | : | Indian Standards. |
| NBC | : | National Building Code |

PEB BUILDING DESIGN AND COMPONENT



DESIGN STANDARD

| | |
|------------------|--------------|
| FRAME | AISC/MBMA/IS |
| PURLIN | AS/IS |
| CLADDING LOAD | AS or MBMA |
| LOAD COMBINATION | IS/MBMA/AS |



BUILDING NOMENCLATURE

INFRA 93 Pre-engineered buildings are custom-designed to meet your exact requirements. The basic parameters that define a pre-engineered building are:

BUILDING WIDTH

Building width is the distance between the steel lines of opposite sidewalls. Building width does not include the width of Lean-To-Buildings or roof extensions.

DESIGN LOADS

Loads are applied in accordance with the latest standards applicable to pre-engineered buildings unless otherwise requested at the time of quotation.

BUILDING LENGTH

This is defined as the distance between the steel lines of opposite end walls. Building length is combination of several bay lengths.

END BAY LENGTH

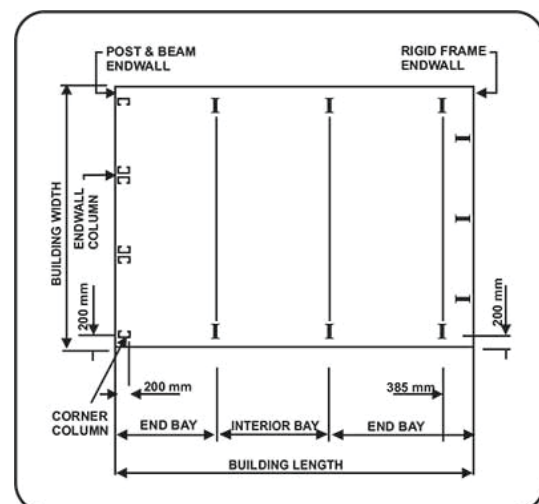
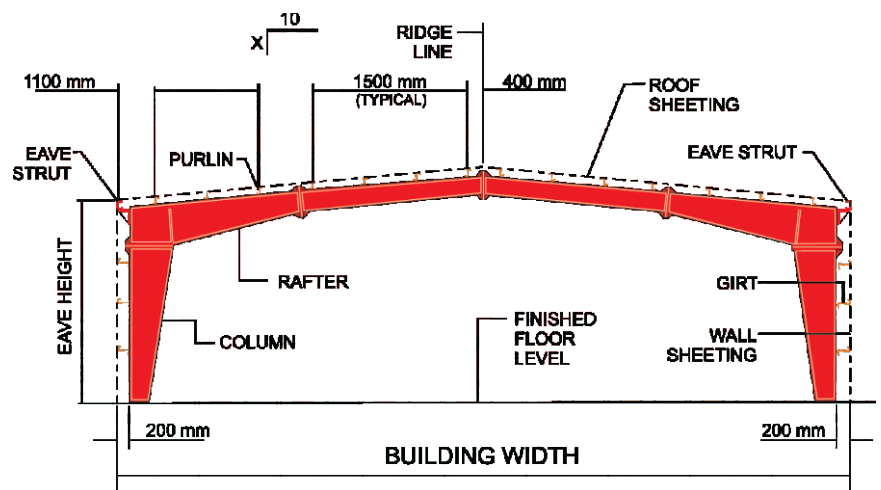
End bay length is the distance from the outside of the outer flange of end wall columns to the center line first interior frame.

INTERIOR BAY LENGTH

Bay length is the distance between the center lines of two adjacent interior rigid frame columns.

ROOF SLOP(x/10)

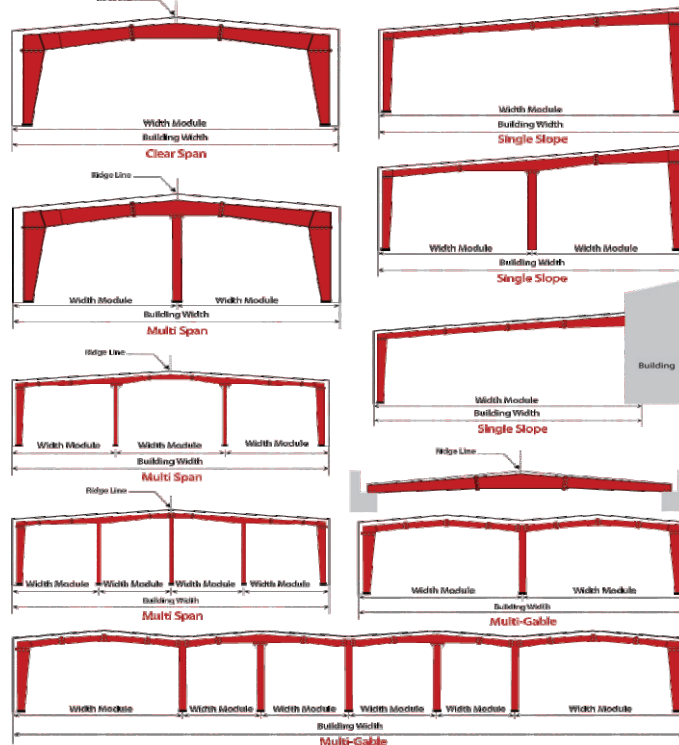
This refers to the angle of the roof with respect to the horizontal base. The standard roof slopes are 0.5 or 1.0 unit of vertical rise to 10 units of horizontal run. Other slopes are available upon request.



PRIMARY FRAMING

Primary framing consists of all structural elements which transfer load to the foundation and comprise of:

- Rigid/Intermediate frames
- Crane brackets
- End wall frames
- Mezzanine Beams and joists
- Wind bracing



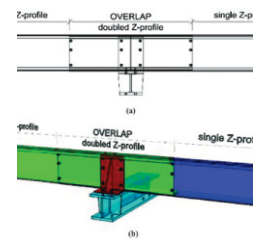
SECONDARY FRAMING

Secondary Framing

Secondary Members in the PEB industry refer mostly to longitudinal roof and wall members that are roll formed from galvanized coils. Secondary members used in a PEB include steel purlins, side runners, fascia channels, door posts, window posts, rafter stays and column stays base angles and other miscellaneous structural parts.

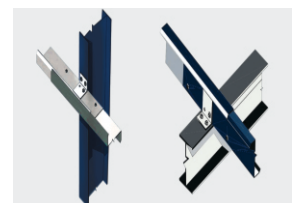
Roof Purlins

Purlins are pre-punched cold-formed "Z" shaped sections, 150, 200 or 250mm in depth with stiffened flanges. The bottom flanges of roof purlins are attached to the outer (top) flanges of the rafters. Purlins are lapped at all interior frames in all structural framing systems.



Wall Girts

Wall Girts are cold-formed from hot rolled steel coils ranging in thickness from 1.5 mm to 3.0 mm for "Z" shapes, and in 2.0 mm and 2.5 mm for "C" shapes (lipped channels). For clear span (CS) and Multi-span (MS) buildings, the sidewall girts are attached (by-passed) to the outer flanges of exterior columns. Sidewall girts are lapped at all interior frames



Eave Struts

Eave Struts are pre punched cold-formed "C" shaped sections, 180 mm in depth with 85 mm stiffened flanges. The eave strut serves as a longitudinal structural bracing member. In addition to acting as a transition point for walls and roof sheeting.

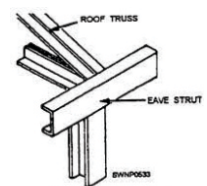


Figure 3-29—Eave strut.

TRUSS PURLIN SYSTEM

Z Purlins / C Purlins

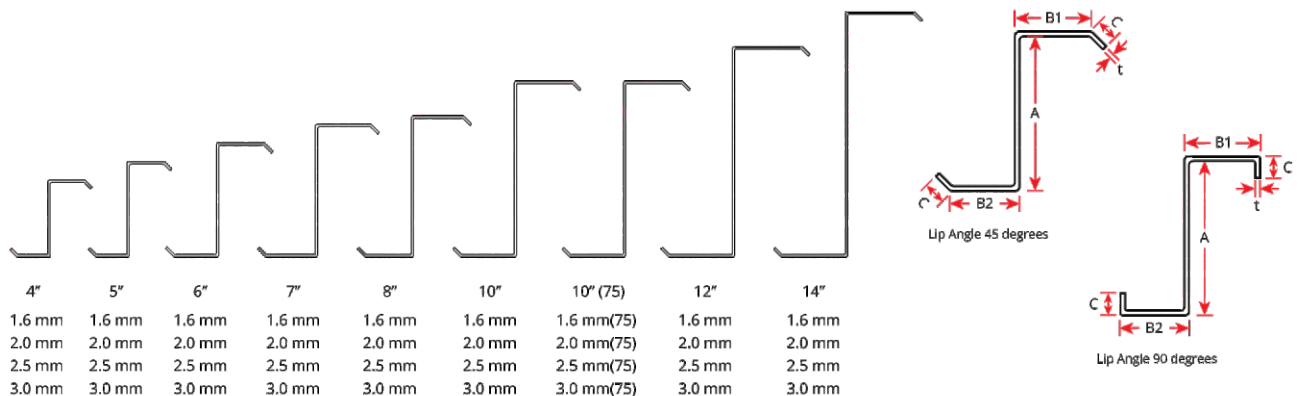
Z/C Purlins are made using cold-formed or rolled sheets for supporting roof. The flexible shape of these beams facilitates various designs solutions. These purlins are extensively used in huge roofing solutions such as godowns, workshops, industrials sheds and many more. The range is known for saving upto 50% on structural sheet in comparison with hot rolled angles. Our purlins are crisp and clean in design and do not allow the scope of inaccurate lengths.

Advantages of Z / C Pulins

- Ability to span length
- Saving in Steel up to 40%
- Fast to erect and easy handling
- No side drilling/cutting required
- Assured dimensions and straightness
- Purlin erection is easier than others
- Saving in construction cost up to 30%
- High durability, versatility and uniform quality
- Low transportation cost due to reduced weight
- Close tolerances on sectional dimensions owing to process of cold roll forming
- Saving up to 35-40% in weight and 20% in cost when compared to hot rolled purlins.

Infra Zed & Infra Cee Purlin Specifications

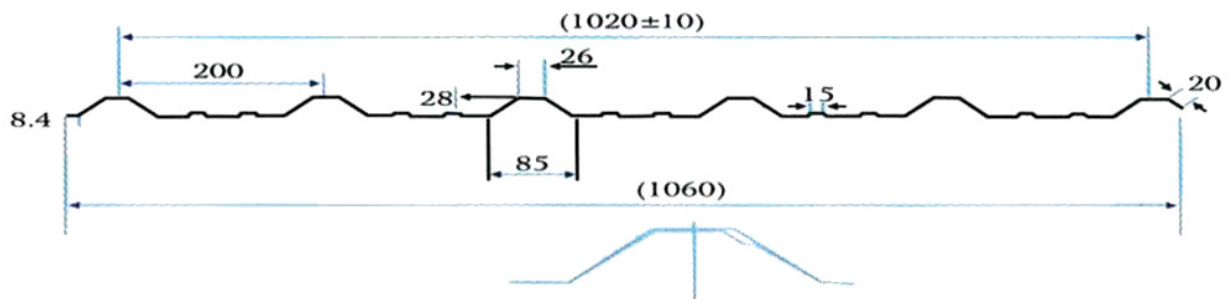
| H | B | A | T |
|-----|----|----|---------|
| 80 | 45 | 15 | 1.6~2.0 |
| 100 | 45 | 15 | 1.6~2.0 |
| 100 | 50 | 20 | 1.6~2.0 |
| 120 | 50 | 20 | 2.0~2.5 |
| 120 | 60 | 20 | 2.0~2.5 |
| 140 | 50 | 20 | 2.0~2.5 |
| 140 | 60 | 20 | 2.0~2.5 |
| 160 | 60 | 20 | 2.0~2.5 |
| 160 | 70 | 20 | 2.0~2.5 |
| 180 | 60 | 20 | 2.0~2.8 |
| 180 | 70 | 20 | 2.0~2.8 |
| 200 | 70 | 20 | 2.0~2.8 |
| 200 | 80 | 20 | 2.0~3.0 |
| 220 | 70 | 20 | 2.5~3.0 |
| 220 | 80 | 20 | 2.5~3.0 |
| 250 | 70 | 20 | 2.5~3.0 |
| 250 | 80 | 20 | 2.5~3.0 |
| 300 | 70 | 20 | 2.5~3.0 |
| 300 | 80 | 20 | 2.5~3.0 |



* All units are measured in mm

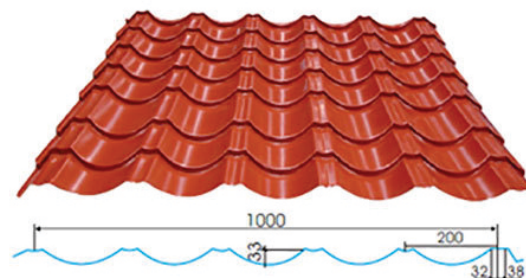
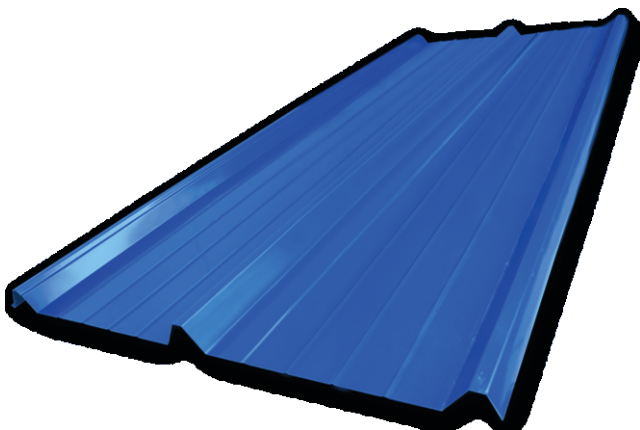
HI-RIB PROFILE SHEET

Hi-Rib Profile offered with perfect overlap so as to provide a high degree of weather protection with anti -capillary fluid & corrosion while at the same time being aesthetically pleasing and cost effective.



Technical Specifications

| | | |
|---------------|---|-----------------|
| Supply Width | : | 1060±5mm |
| Covered Width | : | 1020±5mm |
| Pitch | : | 200±3mm |
| Crest | : | 28±2mm |
| Length | : | Max20mtr |
| Thickness | : | 0.30 mm to 0.80 |



THE INFRA 93 STANDING-SEAM ROOF SYSTEM

A standing seam metal roof system is one of the most durable and weather tight roof systems available in the industry. So when your design requires a metal roofing system that is both aesthetically pleasing and structurally sound. We expertise for standing seam roof system up to 100 meter jointless.

Main advantages :

Weather tight roofing system

Fire resistance rating

Vertical or trapezoid leg standing seams

High durability

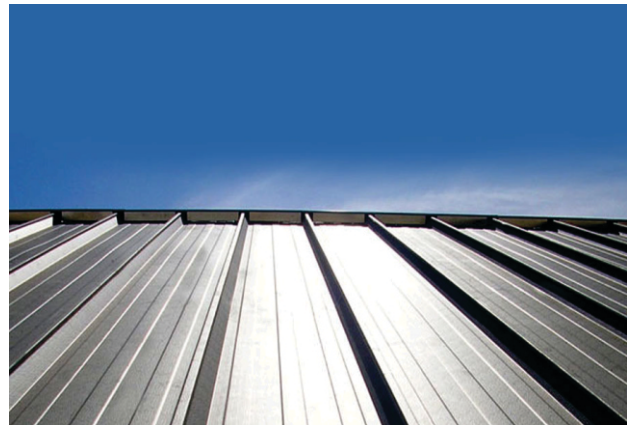
Impact resistance rating

Special clips available for thermal roof expansion & contraction during extreme temperature changes

Save up to 90% in roof maintenance costs, preventing unforeseen repair expenses.

Installing the industry's #1 standing-seam roof system assures proven long-term performance with low maintenance

INFRA 93 features the same rolled seam technology that's used to seal beverage cans eliminating leaks. thus significantly reduces operating costs.



DECK SHEET PROFILE

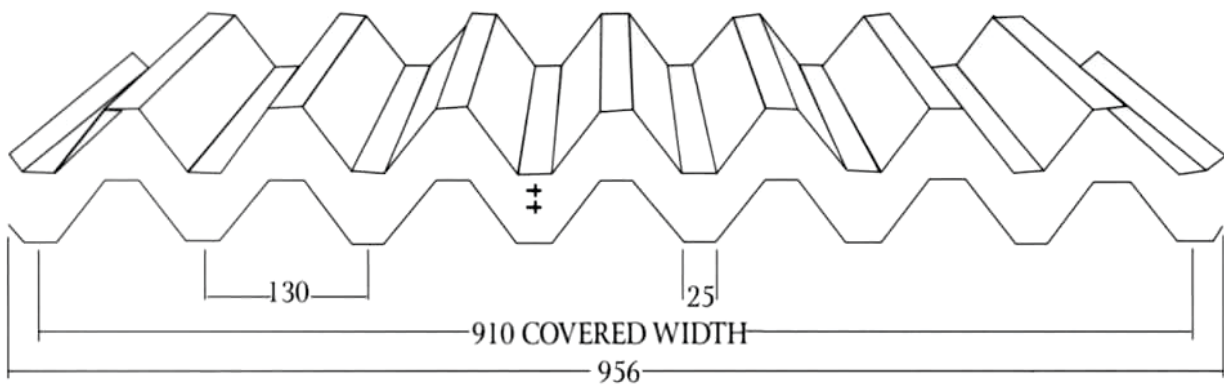
Decks are used for composite floor systems as well as permanent form work. It has strength due to its composite design. Steel Deck Provides a permanent form support due to its positive reinforcement.

Fast Installation

Big Time Saving

Economical

Reduce weight of Concrete Floor by 50%



Technical Specifications

- Supply Width : 910±7mm
- Covered Width : 960±7mm
- Length : Max12 Mtr
- Thickness : 0.60 mm to 2.00 mm
- Depth : 44±1mm
- Pitch : Centre to Centre 130 ± 1mm



Civil Work, Foundation & Padestal



Civil work is the main part of each the building because on the basis of this work all the work going to happen accurate as per the desired goal. in many case both the civil work and Peb work Company are the different Organization due to which there are many huge chances of error due to coordination problem.



Thus to avoid Such problem about occur due to coordination of each time give all work to us and sit back relax and let us do the best work for you. Because we have all the expert team related to each aspect like Foundation, Padestle, Plinth Beam, Slab Wall brick work and plaster etc.



As we are working with the latest trend of composite structure. thus we are doing our best to give the full solution to our client so that they can get the deck slab completed without any hasle.

Why Infra 93 for Civil Solution.

- Economic Due to Same Engineer and supervision
- High Quality Material
- Less chances of errors
- Complete Composite Action
- Civil Drawings and Details Supervision

PUFF PANEL

We offers wide range of PUF Insulated Panels for the various applications such as Cold Storages, Pack Houses. CA chambers, Banana Ripening Chambers, Freezer Rooms, any type of industrial application for Roofing, Wall Cladding, Partitions. Walk On Ceilings, Prefabricated Shelters. Accommodation Shelters, Information Kiosks, Health Centres, Community Shelters. Communication Shelters, High Altitude Accommodation Shelters for Sub Zero Temperature Areas and many more.

These PUF panels are manufactured in a computerised plant and come with Pre-Painted Galvanized Steel Sheets (PPGS), Pre Painted Galvalume Steel Sheets. and Stainless Steel Sheets fascias. The density of Poly Urethane Foam (PUF) sandwiched between two fascias is 40 + 2 Kg/ M3. We offer the range of thickness of panels as follows with various fascia options:
Wall Panels: 40 mm, 50 mm, 60 mm, 80 mm, 100 mm, 120 mm, 150 mm.

Roof Panels: 30 mm, 40 mm, 50 mm, 60 mm, 80 mm, 100 mm, 120 mm, 150 mm



THERMAL INSULATION

For Roof & Walls

We Provide Insulation against heat by using resin bonded glass fiber insulation blankets under the metal roof sheets and on the side walls. The insulation rolls are light weight, strong and available in fsk metallized polyester facings

It provides excellent protection against heat during summers apart from its property of acoustic absorption.

Insulations Are Available

- Glasswool Insulation (With foil or without foil).
- Rockwool Insulation (With foil or without foil).
- Polynum Insulation (Upto desirable thickness).



RIDGE VENTILATOR & ROOF VENTILATOR

This is a gravity-type ventilator which is provided with a bird screen and mechanical controlled damper. Allows natural ventilation of the building Roof Jacks



Infra roof ventilators have been widely applied in commercial, industrial and civil buildings. There is no need consuming energy and it accords with the policy of energy conservation and environmental protection.

BENEFITS OF THE INFRA-VENT SYSTEM

No Operating Costs.
Reduced Power Costs.
Reduced Maintenance Costs

WHY VENTILATE ?

Effective ventilation is an important aspect of a productive force, fresh air makes people feel more alive and vital, whilst stale hot air causes evaporation to occur which is the natural way of cooling down, thus preventing moderate heat stress.

Wind Driven Roof Ventilation

Advantages

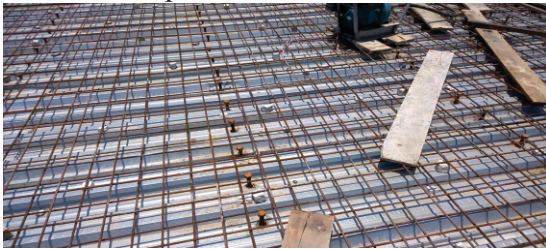
- No electricity
- No maintenance
- No noise
- No back draft
- No rain water
- No birds
- No dust



Deck Slab & Flooring

Deck Slab

Deck slab is a composite type structural element which consist a steel plate covered by the concrete layer followed with the Reinforcement mesh in it. we have describe all about the deck sheet earlier in this brochure. now here we are give the specification of concrete slab. Infra 93 has the special team and equipment to complete and perform the work as desired appearance and according to the loads Req. we use the high quality material like cement sand aggregates and reinforcement also we use all the standard as per the IS recommendations



TRIMIX FLOORING

Tremix System also known as Dewatering System is used in making Industrial Floors, Concrete Roads, Runways, Railways Platforms, Warehouse container Yards, Canal Lining, Pathways, Bridges, RCC Roads, etc

Give us to serve you. and get all the given features below.

- » Higher Compressive Strengths
- » Faster Initial Strength
- » Reduced Shrinkage
- » Reduced Permeability
- » Abrasion Resistant Flooring

P.C.C FLOORING

Most warehouses have concrete flooring. Sometimes, they also have decorative layers on top of concrete flooring. where the load has nothing to do on floor there we have to use the PCC flooring where reinforcement is not required in the flooring also the grade of concrete is lower like M10.

we have delivers 100s of site with these kind of floor. which was super economic for the clients.



PROJECT GALLERY



Shivaji Sughandit Dhoop
Ghaziabad UP



BONITA FURNITURES
Ghaziabad UP



SHRI KANGAN FOOD PARK
BEGUSARAI, BIHAR



WAREHOUSE JAIPUR
RAJSTHAN



NCRTC-RAPID REGIONAL METRO
DUHAI, GHAZIABAD UP



DMRC- NEHRU PALACE STATION
DELHI

PROJECT GALLERY



DYNAMIC EXPORTS MORADABAD UP



SMCC INDIA LIMITED SILVASA



NAMO E WASTE MEHSANA GUJRAT



SHIV SHANKAR RICE MILL, FIROZEPUR PUNJAB



PATANJALI LUCKNOW UP



MICROTEK COLLEGE VARANSI UP



SAMSUNG LUCKNOW UP



SHRI HARI GANGA HOSPITAL BAREILLY UP

PROJECT GALLERY



**HONDA SERVICE CENTER
MAHOBA UP**



**A.H.M ADVERTISEMENT
NOIDA UP**



BADMINTON COURT SONEPAT HARYANA



SK SHOES AND BOOTS, UNNAO UP



**HONDA TAPUKHERA,
RAJSTHAN**



**YAMAHA/SMCC- SURAJPUR
GR. NOIDA**

OUR PROMINENT CUSTOMERS

- Delhi Metro Railway Corporation, Delhi
- L& TConstruction Ltd.
- Bal Krishna Tires Limited, Bhiwadi
- B. L. Kashyap & Sons Limited
- SMCC Construction Pvt. Ltd.
- Yamaha Motors India Pvt. Ltd.
- Maruti Suzuki India Ltd
- Gammon India Ltd.
- ITD Cementation Ltd.
- Monnet Power Company Limited. Delhi
- G. S. Developers Pvt. Ltd. Delhi
- Bhagat Developers, Gwalior
- Central Linen Park (Hyatt Group)
- JSW Severfield Structures Limited, Kamataka
- Watrana Traction Pvt.Limited. Greater oida
- Dharampal Premchand Ltd .. Noida
- Gemco Energy ltd.
- United college of Engineering, Gr. oida
- DLF. Gurgaon
- Caparo-Bawal
- Concrete solutions
- Honda Ceil
- Lanco Infratech Limited.
- Jindal Plast, Bahadurgarh
- Sangarn Associates, Gzb.
- Bhushan Energy Ltd.
- BYG India Ltd.
- Progressive Tools & Components Group (Japanese Collaboration)
- Designco [Lohia Group], Morada bad.
- Dewan India, Morada bad.
- Prakash Woolen, Morada bad

INFRA 93

INDUSTRIES



दिल्ली मेट्रो रेल कॉर्पोरेशन लिमिटेड
Delhi Metro Rail Corporation Limited



HONDA



Bringing flow to your life



BHUSHAN



Equipamiento Médico y Dental



LARSEN & TOUBRO



Confidence Reinforced



WE BUILD YOUR WORLD
CIVIL ENGINEERING & CONSTRUCTION



MONNET



Ahluwalia Contracts (India) Limited



G.S. Developers



MANUFACTURER - EXPORTER



by Rhino Linings



An ISO 9001:2008 Certified Company



Allahabad - Greater Noida



Prakash Woollen & Synthetic Mills Limited



SUMITOMO MITSUI
CONSTRUCTION CO.,LTD.



GAMMON
Builders to the nation



CENTRAL LINEN PARK
PRIVATE LIMITED

Comparison of RCC, Conventional Steel & PEB Structures

| S.No. | Aspect of Comparison | R.C.C. STRUCTURE | CONVENTIONAL STEEL STRUCTURE | P.E.B. STRUCTURE |
|-------|-------------------------------------|--|--|---|
| 1 | Cost of Raw Material | Low in comparison to Steel | High as compared to R.C.C. Structure | Same as Cony Steel Structure but less quantity by 15 to 20% |
| 2 | Strength Characteristics | Brittle | Ductile | Ductile |
| 3 | Seismic Performance | Heavily reinforced structure needed for earthquake prone areas. | Much better in comparison to RCC, since lighter & being ductile structure | Even better than conventional steel structure since it is lighter |
| 4 | Durability | Durable but needs regular maintenance | More durable than RCC structure in long term | More durable & maintenance free for long life span |
| 5 | Speed / Ease of Construction | Construction time is Higher | It takes less time for Construction by about 30% in comparison to RCC | Construction is faster and saves about 50% time & construction much easier as compared to RCC/conv steel structure |
| 6 | Ratio of Dead Load to Live Load | Very High (about 10) | Low (about 4 to 6) | Lower than RCC Structures (about 3 to 5) |
| 7 | Architectural Flexibility | Much flexible to Architectural requirements | Architectural flexibility is possible but involves additional cost | Architectural flexibility is possible with lesser additional cost |
| 8 | Portability of Structure | Portability of Structure is not Possible | Part portability of structure is Possible since different members are welded | 100% Portability of Structure is possible with ease since members are bolted |
| 9 | Repair & Maintenance | Regular Repair & Maintenance is required. Heavy maintenance required for longer life span | Requires less Repair & Maintenance in comparison to RCC | Regular Repair & Maintenance is much less even in comparison to conventional steel structure due to better material & covering/sheetings |
| 10 | Strengthening of Existing Structure | Strengthening of Existing Structure is very difficult & cumbersome | Strengthening of Existing Structure is Possible, requires detailed engineering | Strengthening of Existing Structure is much easier as compared to RCC & conventional steel structures. |
| 11 | Quality Control | A challenging task as construction is done on site. Labour dependent. | Better in comparison to RCC structure. Partly labour & partly machine dependent | 100% Quality Control is possible as most work is carried out in factory. No welding is done on site |
| 12 | Cost of construction | Economical than steel but in high seismic prone area cost increases considerably | Initially costlier than RCC by 25 to 30% | Costly than RCC structure by 15 to 20%. At times economical by 25 to 30% in comparison to conventional steel structure |
| 13 | Whole Life Cycle Cost | Though initial cost is less but whole life cycle cost is higher by @30% | Whole life cycle cost is lesser that RCC structures | Whole life cycle cost is lesser than RCC due to CKD and Portability. |
| 14 | Future Expansion | Very difficult if not planned earlier. Execution is much complicated. | Needs advance planning but can be done with little difficulty. | Can be done even if not planned earlier at convenience. |
| 15 | Work Management | Several agencies. Multi-point coordination | Couple of agencies. Multi-point oordination | Only one agency, Single source & One-Point responsibility |
| 16 | Raw Material Quality | Varies due to number of raw materials, local parameters, difficult to ensure on daily basis | Uncertainty due to recycled-rerolled material. Site working does not ensures tested material | High quality raw material from reputed, limited & controlled source. High strength as well. |
| 17 | Design optimisation | Needs lot of practice and efforts Variabilities are limited. | Limited optimisation subject to available sections. | Due to customisation, high end softwares & dedicated designers much better optimisation. |
| 18 | Site organisation | A much complicated and scattered site with lot of construction material and hassels of storage space. Pilfira ge is very common. | Needs much space on site and a special place for fabrication work with power and storages. Pilfirage also takes place. | A very tidy and organised site with much less space requirements. All stocks checked and controlled. Min. polution and hazards. |
| 19 | Clear spans | Large spans are uneconomical and not construction friendly. | Large spans are possible but involves site work difficulties. Site infrastructure for longer duration is to be established for longer geographically difficult locations it becomes expensive. | Very large spans are possible as most of the part of work will be carried out in shop and transported in CKD condition. Only assembly & erection is to be done at site. |
| 20 | Foundations | Heavy and Bulky foundation. Approx. 20-30% costlier. | Heavier than tailor made PEB structure foundations. | Very light due to reduced dead weight. |



One Stop Solution To All Infrastructure Needs..



CORPORATE OFFICE

AAG-005, SHIPRA KRISHNA AZURE COMPLEX
KAUSHMABI, GHAZIABAD, U.P 201010

FOR SALES ENQUIRY

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