ALFA PEB LIMITED.

ALFA
Pre Fab Multi Storey Steel Buildings
Engineering - Design
Manufacture, Erection
TurnKey Solutions

Shopping Malls, Indoor Stadiums & Theaters
Commercial Buildings Institutional Buildings
Airports, Bus, Railway & Metro Terminals
Residential Buildings Low cost Housing

Pre Engineered Building

The Modern CONSTRUCTION Solutions
Pre Engineered Building

Make, Move & Mount Building
The pre-engineered building system has all the attributes of what the modern life-style demands, i.e., speed, quality and value. There are many applications for pre-engineered buildings, it can be automobile garage to aircraft hangar, bakery to dairy farm, auditorium to hospital, and factory to community hall.

Advantages
- Short project times
- Large clear spans
- Reduced construction cost and time
- Faster delivery and installation
- Factory controlled quality
- Aesthetically Appealing
- Virtually maintenance free
- Single Source responsibility

Applications
- Factories
- Warehouses
- Cold Storage
- Petrol Stations
- Schools/Colleges
- Offices
- Showrooms
- Commercial complex
- Recreational Centres

Basic Building Parameters

Structural Sub Systems

Structural Subsystems (Core Subsystems)
The strength of the pre-engineered building system lies in its ability to incorporate a large number of structural sub systems that use standard components and standard design approaches to satisfy a wide range of custom requirements. The structural subsystems satisfy two types of requirements:

- AESTHETIC
- FUNCTIONAL

ENDWALL ROOF EXTENSION
- SIDEWALL ROOF EXTENSION
- TRANSVERSE PARTITION
- LONGITUDINAL PARTITION
Use of pre-fabricated components reduces site activity for frame construction by up to 75%. It also gives site engineers the freedom to operate. A controlled, manufacturing environment ensures high quality and improves safety on site.

Construction Schedule
A typical 6 storey commercial building in steel.

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- The steelwork package is a single point of procurement and often includes decking and through deck welding of shear connectors, and in some cases, concreting.
- Detailing is carried out by the steelwork contractor and all design information is integrated into a client’s Building Information System by Architect.
- Cladding and services are integrated with respect to the steelwork design.

Fire Protection
Fire engineering is widely used in large, complex and uniquely designed steel buildings. In a fire accident, such buildings will be safe. *Advanced fire protection is dominated by boards.*

- In a commercial building, the floors could provide a **vertical acoustic separating function**, and the internal walls between individual occupancies could provide a separating and **often a fire resisting function**.
- Floors are required to provide a minimum level of acoustic attenuation (sound reduction), but this requirement is normally easily satisfied by the depth of composite floors that are also designed for a minimum of 1 hour of fire resistance.

Acoustic
A raised access floor and suspended ceiling provides some additional benefits, but are not generally taken into account in terms of their acoustic attenuation.

Corrosion Protection
Steel frames do not generally require protection against corrosion. Exceptions may be made for steelwork in coastal and hilly areas.

Steel decking and light steel infill walls use galvanized steel and are protected against corrosion in an internal atmosphere. In infill walls, the light steel components, which are also galvanized, are weather protected by the cladding system and by the external insulation.

Facade / Wall / Cladding
The types of facade systems that are used are decided depending upon the scale of the building and its location. For premium, city center projects, curtain walling systems are generally used and these systems assist in providing internal climatic control.

Separating walls are often in the form of double skin light steel walls, and in steel framed construction. **These walls should be aligned with beams.**

In smaller projects, more traditional cladding systems are generally used, which would include brickwork and stone veneer panels. Light steel in fill walls are often used to support the cladding.
Flooring choices

Floors completed and decked are used as a safe working platform for subsequent installation of steelwork. For this reason, the higher floor in a group of floors (usually three floor levels) is often concreted first.

Steel framed office buildings built for offices and commercial establishments most commonly use the following flooring choices.

Below are the generic forms of flooring systems most commonly used in steel framed office buildings.

Shallow composite slabs
- Using steel deck profiles typically of 50 to 80 mm depth.
- The slab depth is usually 130 to 160 mm, depending on the deck depth and fire insulation requirement.
- Typical spans are 2.5 to 4.5m depending on the deck spanning capabilities.

Precast concrete slabs
- Generally used in the form of hollow-core units of 150 to 300 mm depth with an in-situ concrete slab of 60 to 100 mm depth.
- Typical spans are 5 to 10 m depending on the depth of the hollow-core units.

How to control floor vibrations?
The fundamental vibration frequency of (normal walking) the floor is controlled by maximising stiffness of the floor grid structure.

Site Preliminaries
Site preliminaries include costs of site management and on-site facilities, including hiring of construction and transport equipment. Site preliminaries depend on the scale of the project. Approximately 15% of the total project cost is considered for site-intensive construction. In projects involving higher levels of off-site prefabrication, such as steel construction, this figure could be 10%.
Alfa is the only company in Industry which offers all 3 combination of cold chain solutions under one roof
1. PEB Building for cold storage Industrial Refrigeration
2. Sandwich Puff Panels
3. Refrigeration Equipment & Solutions

Alfa specialized in state-of-the-art cold chain solutions that cater to all types of cooling needs in the industry. Our esteemed clients are from industries as diverse as Agro, Food Processing and Pharma. Tailor-made solutions enable us to meet customers cooling needs. Alfa specializes in a wide range of refrigeration suited to the food industry, including storing farm produce, freezing, storing cooked and semi-cooked, poultry, seafood, fruits and vegetables.
Prefabricated Low Cost Housing
We are the leading manufacturer and supplier of Low cost housing. We offer high quality range of prefabricated low cost housing. These are quite popular with our clients as they can be easily installed, assembled and dismantled. We can make these houses as per the specification of the clients. This can be availed from us at market leading prices.

Security Cabins
We are the leading manufacturer and supplier of Security cabins. These cabins are offered in custom built range to suit the exact needs of the client. These cabins are fitted with water proof doors and windows.

Labour Colony
Prefabrication method is applied to Low Cost Housing. We use removable, reusable and recyclable frameworks. In prefabricated construction, the components are ready made, self supporting. The execution can be faster than conventional building construction methods thereby reducing the time period of construction which results in early returns of investment.

Standing Seam Roofing
Standing seam roofing is the most reliable roofing material. The risk of leakage is excluded due to concealed fixing, reliable seaming, and absence of through holes. Standing seam roofing blends into architectural character of cities thus being applied for new building construction as well as for remodeling and renovation.

Sandwich PUF / PIR Panels
Our Products: PU/PIR Sandwiched PUF Panels
                      Rock wool Core Sandwich Panels
                      EPS Core Sandwich Panels

Z & C Purlin
ALFA purlins girls & eve struts are secondary structural members used to support the wall and roof panels.
**Cold Storage Door / Clean Room Door**

Designed for simple, functional, easy to use and robust, Alfa hinged doors are available in standard sizes for low and high temperature applications. The door finish is of “food safe” either PCGI or stainless steel. The door leaf is injected with 40 kg/cum density CFC free polyurethane. Hi-tech hardwares like hinges, laches with handle and emergency exit locks are fully loaded and delivered.

**Clean Room Wall Partitions / Ceiling Panels**

A vital ingredient in the creation of Clean rooms, Wall panels form a substantial part of our product offerings. ALFA CLEAN wall panels are manufactured in customized sizes depending on the requirement.

A perfect ceiling makes a perfect Clean room, ALFA Ceiling Systems are designed to fit every requirement and adhere to stringent Quality Standards that fit in seamlessly with the rest of the room paneling. The Ceiling Panels are fastened to profile that are placed on a particle-tight extruded aluminium grid matrix with silicone sealant.

**Polycarbonate Strip Lighting for Natural Lighting**

Rigid polycarbonate transparent roof glazing sheets available in required lengths matching color coated sheets, profiles made out of the finest Lexan Polycarbonate sheets from Sabic Innovative Plastics.

Available thickness: 2mm, 2.5mm, 3mm

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**Turbo Ventilators**

Turbo ventilators are designed and engineered to exhaust Industrial pollutants such as smoke, dust, poisonous gases, humidity, fumes, heat and many more invisible irritants from the covered area. Turbine Ventilator provides a safe, cool, healthier and more controlled environment by removing the entrapped heat and industrial emission ensuring the health of workers, thus contributing to an increase in workers productivity. Turbo Ventilators provide energy free cooling and fresh air through out the year.

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**Ridge Ventilators**

Ridge ventilators provide natural air circulation in a Alfa building. They are installed as continuous or single units. They are designed for mounting to the building ridge using gravity flow to exhaust heat.

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**Standard Gutter**

- Valley Gutter
- Box Gutter

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**Flashing**

- Cap Flashing
-滴水天沟
- Framed Opening Trim
- 拱形天沟
- Expansion Joint Trim
- 隔热条
- Outter Cove Trim
- 外墙收口
- Hood Trim
- 天沟盖板

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*Images and diagrams are not provided in the text representation.*