MALAR ENERGY AND INFRASTRUCTURE PVT LTD.,

India's No.1 precast solution provider


Site photograph of Sri Rajarajeshwari Township, near Trichy.
Construction by Malar Energy & Infrastructure private Ltd.,
Size of the project: 2 Million sq.ft
MALAR
ENERGY & INFRASTRUCTURE PVT LTD

Garden view of *SRR Township* - work in progress.

About us

For over the last decade India has witnessed a drastic transformation in the fields of Energy & infrastructure. We MALAR ENERGY & INFRASTRUCTURE Private Limited, are privileged to play a constructive role in shaping the future of energy & infrastructure in India and are determined to take this evolutionary exercise to its next height.

Malar Energy & Infrastructure Private Limited is headed by Shri. RR.GOPALJEE. He is the Founder-Director of the group. He hails from Tamilnadu's well known and reputed media family.

Shri. RR.GOPALJEE
Founder-Director

Malar Energy & Infrastructure Private Limited is specialized in the prefabricated building construction. We provide innovative building solutions for our customers. Emphasizing customer service and quality products, we start close collaboration with clients, architects, engineers and contractors in the early stages of the project in order to develop a total solution without any compromise.

Technical assistance, guidance and advice during the planning, design and construction are always available to our customers to produce the best possible result in a project.

Our current production capacity is 25000 sq.ft of Slab per day, 50000 sq.ft of wall panel per day, Column, Beam & Staircase can be produced as per requirement. In short ,we are capable of producing precast elements for 30000 sq.ft built up area per day.


LIFTALL

Our Vision

To be recognised for being India's best construction company, delivering every project to the highest standard, with precision and professionalism. To achieve 'bringing dreams to life' with our clients and all involved, while ensuring enjoyment is gained throughout the construction journey.

Our Mission

MALAR's mission is to undertake and complete construction projects to a standard constantly exceeding our client's expectations.Our products and services will be of the highest quality, value for money and will optimize value addition for our clients.

We are a team of committed and positive people constantly striving to be balanced, integrated and honest.We will always work with others within our industry to discover new and innovative ways to consistently improve and educate ourselves to achieve maximum effectiveness with every project.


66 ft high precast entrance arch

PRECAST INTRODUCTION

What is precast?

Precast Concrete is a construction product produced by casting concrete in a reusable mould or 'form' which is then cured in a controlled environment, transported to the construction site and erected in place. In short proposed structure split into simpler components, produced as individual units and assembled in position to form complex structure.Our ancestors used this technology centuries back to construct historical structures using stones instead of concrete which is a standing proof.

Better building through technology

As demands increase for fast design-build schedules and sustainable structures, precast, prestressed concrete systems are fast becoming the most effective way of achieving these goals.

Our knowledge, scale and experience allow us to creatively solve structural issues quickly, competently & economically. We are passionate about taking on challenges and delivering quality precast systems.

Why precast?

When all economic factors are considered, precast / prestressed concrete is increasingly the choice of today's designers. Industrial manufacturing techniques permit cost savings which cannot be achieved in step by step field construction methods.

Precast Advantage:

Strength:

High tensile steel and high compressive strength concrete are combined to form components which frequently would not be achieved within the same size limitations using other modes of construction.

Durability:

Inherent in high strength concrete are fire resistance, immunity to corrosion, resistance to organic attack, and weathering resistance. These result in an increased life span of structures.

Quality:

Industrial manufacturing methods permit a degree of quality control which is normally unattainable for field work. Precast concrete affords the designer the opportunity of preinstallation inspection and approval.

Speed:

Precast concrete construction permits fabrication of project superstructures concurrent with installation of foundations resulting in substantial savings of overall construction time.

Economy:

Shorter construction time results in savings in main contractor's overheads and financing cost. High quality, durability, flexibility, & aesthetics will result in significant cost savings in construction cost, energy consumption, maintenance costs and long lifespan of the building.

Aesthetics:

With precast concrete, architects and designers can full reign to their imagination allowing all sorts of decorative patterns, reveals, cornices, recesses & curvature in their design. Precast concrete surfaces finishes offers a rich and varying array of possibilities, allowing greater freedom & creativity.

Additional Benefits

In addition to the advantages listed above for precast, prestressed precast system offer the following added features:

Light Economical construction:

Prestressing and high strength concrete makes it possible to use less material to achieve similar load-bearing capacity and, hence, make substantial cost savings in both reinforcement and concrete. Reduced section sizes lead to lower dead loads and cost savings in foundation.

Long Spans:

Prestressing of the precast elements means longer and more efficient spans, allowing large, open spaces reducing the number of columns and beams in the structure.

High load capacity:

Precast prestressed elements can carry much heavier loads as compared to normal reinforced concrete structures, which make them ideal for heavy load bearing structure such as tunnels, bridges, car parks…

Sustainability:

- Precast concrete contribute to sustainable and Eco friendly solution in many ways.
- Optimum use of materials with literally no waste, since it is produced in a factory by trained personnel under stringent quality control.
- Use of recycled materials like fly ash.
- Less noise, dust & waste at work site.
- Reduce energy consumption by using insulated precast elements.


Erection of hollow core slabs @ Pathanjali Silks showroom site at Trichy.
HI-TECH LIFT MOVERS (INDIA) P. LTD
NAMAKKAL - 9443535466

Products

Our range of precast concrete products are manufactured in a controlled factory environment which enable us to ensure consistent quality and precision. Our products are manufactured in strict quality control processes, world-wide best practises and in compliance to local and international standards.

Our Range of Products include

- Precast Form Slab
- Hollow core slabs
- Wall Panels
- Stairs & Landing
- Columns & Beams
- Full Precast Building Systems
- Infra structure Elements (Road Barrier, Drain, Manholes, Tanks, Trenches etc…)

PLANK SLAB

- Precast Plank Floor system is a combination of precast plank slab of 60 mm minimum thickness and a structural concrete topping cast at site. Plank slabs are used in residential, general or industrial buildings.
- Precast Plank slab is composed of a thin reinforced or prestressed concrete plate incorporating a steel lattice girder projecting from the slab.
- Plank thickness varies from 60 mm to 100mm.
- It is supported in its temporary state, prior to the pouring of the in-situ concrete, by lattice girders and temporary propping. The Propping is removed once the concrete has reached the required strength.
- The diagonals of the girders serve to withstand the shear stress and provide excellent bonding between the precast and in-situ concrete layers.

Precast Hollow core slab installation in progress.

The advantages of Precast Plank Slab

- Upto 3m wide elements resulting in fewer joints or no visible joints in residential buildings.
- No negative camber.
- Integrated openings and notches for service risers and other service penetrations.
- The flexibility to produce elements with complex geometry that is not possible in automatic Long line manufacturing process.
- The 75mm pre-cast elements facilitate the laying of plumbing and electrical services on top of the elements, prior to pouring the in-situ concrete.
- Elimination of site shuttering.
- Shallow floor construction reduces floor to floor height.
- Composite action aided by lattice girders enhances structural integrity and robustness.
- Superior soffit finish ideal as finished surface.

HOLLOW CORE SLABS

Prestressed hollow core slabs are the most widely used type of precast flooring. This success is due to the highly efficient design and production methods, choice of unit depth and capacity, smooth underside and structural efficiency. longitudinal joint. The edges of the slabs are profiled to ensure an adequate transfer of horizontal and vertical shear between adjacent units.

- The standard profiles have a fire resistance of 60 to 120 minutes. The latter is obtained by raising the level of the tendons. The nominal width of the units is 1200 mm, inclusive of the Longitudinal joints.

- The hollow core slabs are manufactured on long-line beds. The slabs are cut to length using a circular saw. A square end is standard but skew or cranked ends, which are necessary in a non-rectangular framing plan, may be specified. Longitudinal cutting is possible for match plates.

Precast wall panel ready for erection.

WALL PANELS

Precast wall panels are structurally designed and engineered to transfer shear, support floor and roof loads, as well as offer a wide range of architectural finishes for the exterior. Precast concrete wall panels provide financial, functional and aesthetic value for exterior wall systems while offering the building owner peace of mind knowing the walls have long-term durability and require little or no maintenance

The advantages of precast wall panels

Cost Effectiveness

- Fast erection allows the buildings shell to be enclosed quickly in all seasons ensuring no delays due to bad weather, so the building owners can get to business.
- Low maintenance exterior provides a substantial long-term savings while keeping the exterior in first-class condition.

Energy Efficient

- Precast panels can be designed in numerous ways to help reduce heating and cooling costs substantially.
- Recessed window walls and vertical fins can be used to shade windows from the sun.
- Thickness of insulation can be manipulated to increase the R value of the panels.
- The concrete panel's high thermal mass is unmatched by any other material.

Durability

- Precast concrete is a strong material which is highly weather resistant holding up against most environmental conditions.
- Precast panels have superior fire resistance. Adding safety and security to the building gives the owner peace of mind.

Precast Stairs.

PRECAST STAIRS & LANDING

Precast concrete stairs are widely used in apartments, villas, commercial and high rise buildings.

Benefits

- Fast and easy to install.
- Eliminates the need of expensive on site shuttering and supporting scaffold.
- Provides un-obstructed and safe access to floors during construction.
- Precast stairs are produced with smooth surface finish.Hence no finishing required on stair surface.

BEAMS & COLUMNS

- Our standard beam cross sections include rectangular beams, Curve beams, Ledger beams and I- beams and column cross sections include rectangular and circular columns.
- Also any shaped beams and columns can be done upon clients' requirement.

Benefits

- No need for expensive on-site form work.
- The prestressing reduces material consumption and facilitates buildings with longer spans than the traditional reinforced concrete.
- Shallow construction depths can be obtained by using prestressed concrete for horizontal structures,thus increasing the available space.
- Since production takes place under controlled conditions, the end product is of a higher quality and its dimensions are more accurate.
- Rapid construction and erection.
- Use of high strength concrete aids in reducing the cross sections of columns & beams up to 50% resulting in reduced dead load and construction costs.

Precast Bridge construction in progress.

INFRASTRUCTURAL ELEMENTS

We produce a wide range of precast concrete elements for infrastructural projects such as bridges, culverts, railway sleepers, concrete piles, road barriers etc…

PRECAST BRIDGES

Several systems are available of which the most important are solid slab bridges, girder bridges with cast in-situ deck and complete precast box girder bridges.Several systems are available of which the most important are solid slab bridges, girder bridges with cast in-situ deck and complete precast box girder bridges.Solid slab bridges are constructed with precast units and a cast in-situ topping, acting together as a composite structure. They are used for decks of bridges, via ducts, culverts, tunnel decks, etc. For small spans up to about 8.00 to 13.00 m, solid precast slabs can be used. They are modulated on 1200 mm width, and the thickness varies from 150 to 350 mm. The slabs are positioned side by side and a structural topping varying from 150 to 200 mm is cast on site.

Girder bridges are composed of inverted T-beams or I-shaped beams. The inverted T-beams can be placed side by side, to obtain a closed underside with a high resistance to collision by trucks. The elements may also be placed at a distance. The beams are connected by transversal diaphragm beams at each support and also in the span when needed. The deck is cast in-situ. The system is suitable for spans between approximately 15 and 35 m.

In box beam bridges, the elements are placed side by side or at a small distance. After erection the site work is limited to the filling of the longitudinal joints and the transversal post-tensioning of the bridge. Protruding reinforcement is available in the beams for connections to cast in-situ edge profiles, joint constructions, screeds, etc.Precast bridges are well suited for projects where the realization of classical scaffolding supported on the ground is prohibitively expensive and where the speed of construction is mandatory: watercourses, railways, roads and highways in use, in order to limit traffic restrictions.

Erection of precast wall panels.

Turnkey Construction Solution

From planning and design through to construction, Malar Energy & Infrastructure provides a comprehensive service - a complete 'turnkey' solution, working in partnership with the client to develop the optimum building solution. From our roots in manufacturing processes, we are able to apply the expertise and "know how "from our industrial background to all our specialist contracting divisions.

The unique way the Group is structured allows to tap into an established, specialized, and reliable internal supply chain capable of delivering products and services that meet the quality,programme and cost requirements required by our clients. Our dedication and creativity coupled with its complimenting range of products and services to provide individual solutions for each and every project undertaken.

Casting concrete in a factory allows the manufacturer to exercise precise control over all variables that affect its durability, strength and appearance. We are able to offer an integrated pre cast solution, through the early involvement clout 'in house' pre cast designers and our contracting expertise. We are able to maximize the benefits of this innovative 'off site' production method by standardizing the design, designing the panels to accommodate the integration of other construction components and application of the most economic and efficient structural design.

We are able to offer cost and programme efficiencies by designing out at the earliest possible stage 'in situ' processes and replacing them with controlled, standardized and quality assured systems delivering to site the elements which are efficiently lilted and placed into position.

Pre Cast applications include

- Precast High Rise Buildings and Towers
- Precast Systems for Offices, Industrial Buildings, Warehouses and Camps
- Precast Multi-Storey Car Parks
- Precast, Prestressed Slabs and Walls, Staircase, Columns and Beams
- Boundary Walls

SERVICE

SALES & TECHNICAL SUPPORT

Our ability to offer industry-leading sales and technical support is hard to beat, as is our dedicated team that can provide guidance at every stage of a project, from concept to completion. By working with our customers and delivering practical support right from the earliest planning and design stages, we can help specify the most appropriate solution. The result is that our customers benefit from cost-savings and reduced construction time by avoiding commercial and technical issues before they arise.

DESIGN, PLANNING & PROJECT MANAGEMENT

Our customers benefit from the detailed industry knowledge that our Technical Support and Design Team provides. We work together with them and their consultants to use our extensive industry experience in helping our customers achieve more effective designs that generate cost savings, minimize construction schedules and ensure that their original concepts are translated into completed buildings.

MANUFACTURING & DELIVERY

Our extensive experience in manufacturing precast concrete products allows us to save, at every stage, our client's resources, time and costs.
Strong supply chain ensures competitive prices and high level of service.
Once our products are ready for delivery they are placed in the stockyard so that they arrive on-site in the sequence that will be required for erection. This process eliminates double-handling of the products and so saves time.

INSTALLATION & ON SITE SUPPORT

On site, our experienced erection crew provides hands on support deploying their expertise and knowledge in implementing your construction project in the most efficient way.
A seamless service from the initial planning to finished project that saves you time, hassle and money at every stage of the process.

A team of delegates from Japan at our QC Lab .

QUALITY SYSTEM

Malar Energy & Infrastructure Pvt.Ltd have established a Quality Management System in line with ISO 9001:2008 standard requirements.Company has its own in-house Design team, Production and Erection crew with sufficient machinery and equipment to carry out the work complying with the Quality Standards.

Process & Quality Control

The purpose of the quality control process is to ensure the quality of the precast concrete elements produced by MALAR using the materials and methods complying with the requirements of relevant Standards and in-house Quality Control System.

Quality Control Programme

Quality control is monitored by our QA/QC department comprising of QA/QC Manager and QA/QC Engineers at different stage of execution of work. Our quality program will be covered under the following categories.

- Design and Drawings
- Materials
- Reinforcement Fabrication & Fixing
- Concrete
- Demoulding, Storage and Transport
- Erection


F
A
Q

FAQ

Is precast concrete different from other types of concrete?

Precast concrete is different because it is made in a factory by highly experienced personnel who apply stringent quality-control measures. In the factory environment,precasters are able to achieve consistency in temperature and moisture and low water cement ratios that are not possible in field-fabricated concrete. Precast concrete can easily attain strengths of 5000 psi to 7000 psi or more, with densities that minimize permeability.

Is precast concrete energy-efficient?

The thermal mass of precast concrete absorbs and releases heat slowly, shifting air conditioning and heating loads to allow smaller, more efficient heating, ventilating, and air conditioning (HVAC) systems. Insulation is often used in architectural panels and sandwich wall panels to increase thermal efficiency, with continuous insulation (ci) in walls being possible. The resulting savings are significant up to 25% on heating and cooling costs.

Can precast concrete members be reused?

Precast concrete members are unique in that they are individually engineered products that can be disassembled. Designers can easily plan future additions to buildings, because the precast concrete components can be rearranged. Once removed, precast concrete members may be reused in other applications. Precast concrete is also friendly to down cycling, in which building materials are broken down, because it comes apart with a minimum amount of energy and retains its original qualities. An example of down cycling would be the use of crushed precast concrete as aggregate in new concrete or as base materials for roads, sidewalks, or concrete slabs.

FAQ

Is precast concrete a green building material?

Precast concrete contributes to green building practices in significant ways. The low water cement ratios possible with precast concrete -0.36 to 0.38- mean it can be extremely durable. The thermal mass of concrete allows shifting of heating and cooling loads in a structure to help reduce mechanical-system requirements. Because precast concrete is factory-made, there is little waste created in the plant (most plants employ exact batching technologies) and it reduces construction waste and debris on site, reducing construction IAQ concerns. The load-carrying capacities, optimized cross sections, and long spans possible with precast concrete members help eliminate redundant members, and concrete readily accommodates recycled content.

How does precast concrete contribute to LEED-NC rating points?

Precast concrete:

- Minimally disrupts the site (area and time).
- Reduces damage to drainage paths and natural habitats.
- Increases open area when multi-level parking structures are used.
- Reduces the heat-island effect because of concrete's light color.
- Improves energy efficiency and thermal comfort.
- Reuses and recycles formwork, keeping materials out of the landfill.
- Can be reused or recycled.
- Can use waste and recycled materials such as slag, fly ash, and silica fume.
- Is generally made from materials that are extracted and manufactured regionally.
- Does not off-gas, and does not need to be sealed or Painted.

Project Gallery

Maharishi Vidya Mandir CBSE School – 54,000 Sq.ft @ SRR Township
Constructed in a record time of 60 days

Project Gallery

Pathanjali Silks Showroom @Trichy – B+4 -27,000 Sq.ft

SRR Township – 5000 Residential units - 2 Million sq ft.

MALAR

ENERGY & INFRASTRUCTURE PVT LTD

India's No.1 precast solution provider

Corporate Office:

No.57, 1st Floor,Pantheon Road, Egmore, Chennai - 600 008.

Sales & Marketing Office:

No: 116 B, SR Complex Bharathiyar Salai, Cantonment, Trichy-620 001

Branch office:

29, Mayo Street, #03-01 Singapore – 208315.Ph : +65 6294 8277, 6294 8377

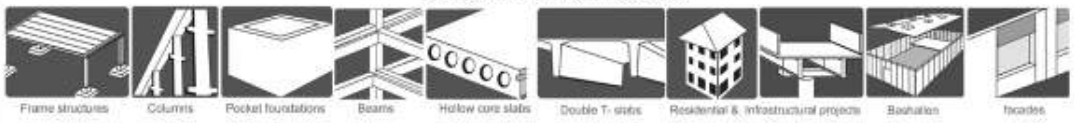
Factory Address:

SRR Township, Viralimalai-Illuppur salai, Pin - 622 102

Phone: +91 431-2417199 / 2413099 /+91 044 4214 6992 / 4355 6026

email: malarinfra@gmail.com website: www.malarinfra.com

Our product range includes:



Member

CREDAI

Confederation of Real Estate Developer's Association of India

ISO 9001