POWEROL®

PRECAST PLANT

India's Leading **Make in India** manufacturer of superb quality Moulds & Turnkey Precast Plants established in Chennai

INDIA'S CONSTRUCTION MACHINERY MANUFACTURER

www.powerol.com

PRECAST PLANT

Powerol is the pioneer in Precast Plant machinery manufacturing industry by setting up the largest capacity production facility in India. Precast refers to a construction method in which building components or elements are manufactured off-site in a factory or casting yard and then transported to the construction site for installation. Precast elements can include things like walls, floors, beams, columns, stairs, and even entire building modules.

The precast manufacturing process involves pouring concrete into molds that have been prepared in advance, and then allowing the concrete to cure and harden before the precast elements are transported to the construction site. This method allows for consistent quality control, since the manufacturing process can be closely monitored and standardized, and reduces the amount of time required for on-site construction.

Precast concrete elements can be made in a wide variety of shapes, sizes, and finishes, and can be customized to meet specific project requirements. Precast construction can be used for a wide range of building types, from residential homes to commercial buildings, bridges, and even infrastructure projects like tunnels and highways.

INNOVATIONS IN PRECAST

The specific ratios and types of these raw materials used in precast concrete production can vary depending on the desired properties of the final product, and the specific requirements of the project. However, the basic ingredients of cement, aggregates, water, and reinforcing steel are common to most precast concrete products.

Also, it is a building technique that uses less energy and raw materials. Precast consumes less of everything, including cement, water, and steel, than cast-in-situ construction, and generates less waste both on-site and in the manufacturing facility.

Precast is appropriate for all building kinds, whether they are residential, commercial, or public. Precast can be used as the only material for construction or as the only component of a composite structure. Pre-stressed slabs allow residential buildings to have spans between 6 and 12 metres with only the need for load-bearing external walls. This offers considerable architectural flexibility and permits the use of expansive, interconnected spaces or whatever is most advantageous for the building's intended users.

Precast has lower lifetime costs than any other building alternative and has good insulation and thermal qualities. Nearly every size, shape, form, and finish are possible for facades.

ADVANTAGES OF USING PRECAST

Time Saving

Precast concrete can be manufactured off-site in a controlled environment while on-site foundation and other site preparations can be carried out concurrently. This means that the construction process can be faster and more efficient compared to traditional on-site construction methods. Additionally, precast elements can be installed quickly once they arrive on site, further reducing construction time.

Quality Control

Precast concrete is produced in a factory environment with strict quality control measures, including proper curing conditions and careful monitoring of the mix proportions. This results in a more consistent and higher-quality product than traditional on-site cast-in-place concrete construction.

Design Flexibility

Precast concrete can be customized to suit a wide variety of project requirements, including complex shapes and sizes. The material can be cast into a wide range of finishes, such as exposed aggregate, polished, or painted, allowing architects and designers to achieve their desired aesthetic goals. Precast concrete can also be combined with other materials such as steel and glass to create hybrid systems that offer even greater design flexibility.

POWEROL - PRECAST PRODUCTION TECHNOLOGY

Powerol is the pioneer in precast floor production methods. Because of this, we are able to provide you with huge, efficiently operating factories or effective small-scale production solutions, depending on what best matches your demands, as well as safe and user-friendly tools and technologies that produce real added value for your floor manufacturing. Our precast floor production process includes hollow-core slabs, ribbed slabs, and half slabs.

Precast walls, including sandwich and solid walls, filigran slabs, double walls, and specialty goods like balcony and socle slabs, are all covered by our production process. For cutting prestressed goods including hollow-core slabs, T-beams, and planks, Powerol implements semi-automated cross, longitudinal, and diagonal cutting.

BENEFITS OF POWEROL PRECAST PLANT

Minimal Operating Expenses

Powerol manufacturing lines are designed to provide the lowest operational costs in the precast industry. The different devices are made to be effective with raw materials, quick, user-friendly, sturdy, and able to sync perfectly with one another. Our project office and installation services ensure that your production will start on time when you start building your plant.

Optimal Final Goods

Powerol employ shear compaction in our extruders because it ensures the best compaction outcome. In order to ensure exact measurements of precast items, we also produce our beds to strict specifications, with corrosion-resistant design and fully even surfaces.

Enduring Dedication

From the first definition of precast investment through precast production renewal, we stand by you at every stage of your precast business and assist you in finding the best fit for your needs. From building, investment, and production planning to factory, line, and machinery maintenance, optimization, and renewal, our skilled specialists lead you. In our technical support section, we have qualified professionals ready to assist you with any problems you could encounter. To enhance your production process, premium retrofit kits, upgrades, and spare and wear components are also offered.

PRECAST PLANT MAINTENANCE SERVICES

Regular Inspection

Providing Spares

Preventive Maintenance

Plant Upgrades

Safety Measures

Documentation

ENHANCING OUTPUT

From building design all the way to the construction site, the fully automated Powerol production plant streamlines the production of precast walls. Modern table circulation technology, cutting-edge production equipment, and smart software are all present on the line. Plans, checks, and controls for the production process are all automated.

Materials are directly synced with product design information as part of production optimization and material management, and the manufacturing execution system constantly displays the quantity of goods being produced. Real-time production data is continuously accessible for any potential process adjustment needs, and line operations are monitored and managed from a single central location. Also, the system displays the whereabouts of the completed goods, saving time on pointless tracking.

Powerol precast wall panels are made of extruded, non-load-bearing concrete and are produced using fully automated equipment under tight quality control procedures. Room-high partition panels with precise dimensions are created using Powerol production line for use in the construction of medium to high-rise structures. When compared to traditional brick construction and block work, the speed of construction can be increased by 7 times and 5 times, respectively.

ENVIRONMENTAL CONSERVATION

Precast walls are typically made in a factory-controlled environment, which means that they are produced with minimal waste and can be recycled. This reduces the amount of waste generated during construction, as well as the energy required to produce the walls on site. Additionally, the use of precast walls can help reduce the environmental impact of transportation, as the walls can be transported more efficiently to the construction site.

Precast walls also offer excellent thermal insulation, which can help reduce energy consumption and greenhouse gas emissions associated with heating and cooling buildings. The durability of precast walls means that they have a longer lifespan than traditional construction materials, reducing the need for maintenance and replacement over time. All of these factors contribute to a more sustainable and environmentally friendly approach to construction.

POWEROL

Unit 1 - No 123, Apex Signature - G1, Jaya Lakshmi Nagar, 1st Street, Kattupakkam, Chennai-600056

Unit 2 - 35/2 & 38/3, IIDC Nagari, Keelapattu Village, Nagari, Andhra Pradesh 517 590