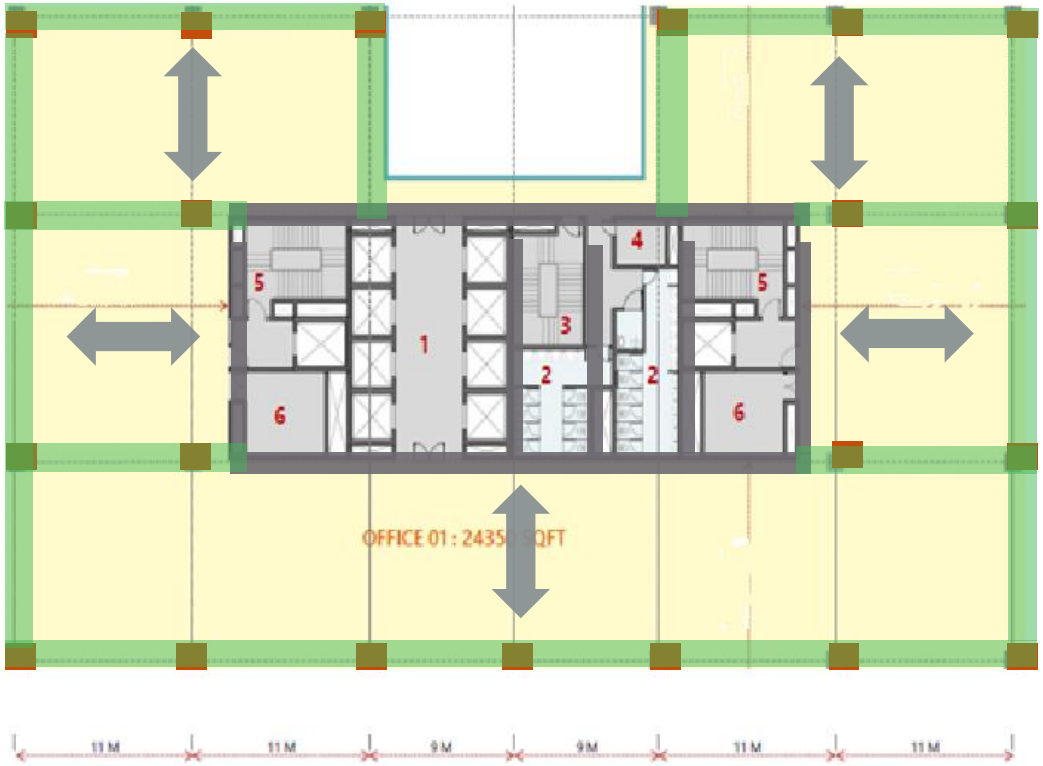
PRECAST SOLUTION FOR COMMERCIAL BUILDING

Advantages compared to conventional construction

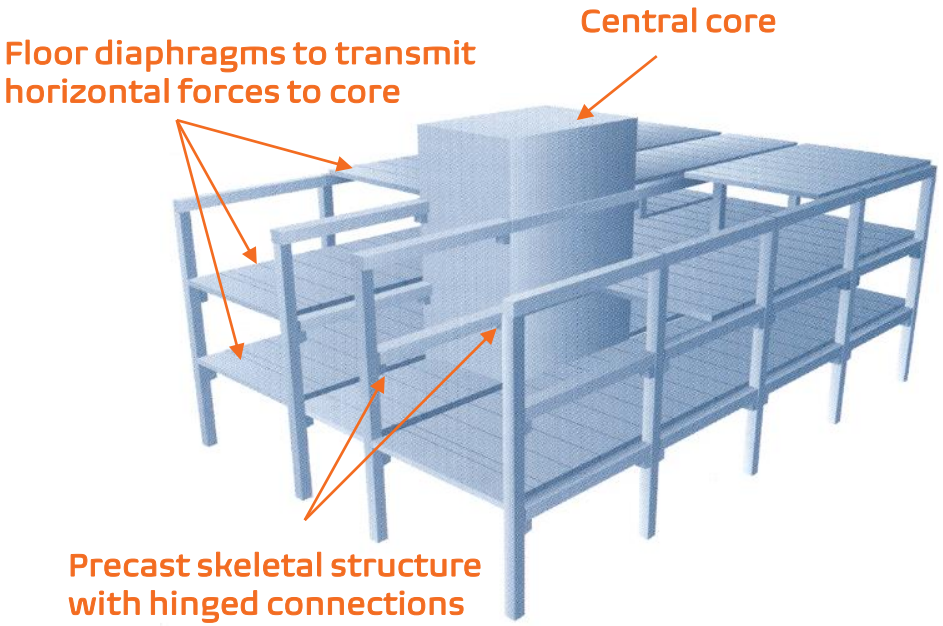
Structural Framing

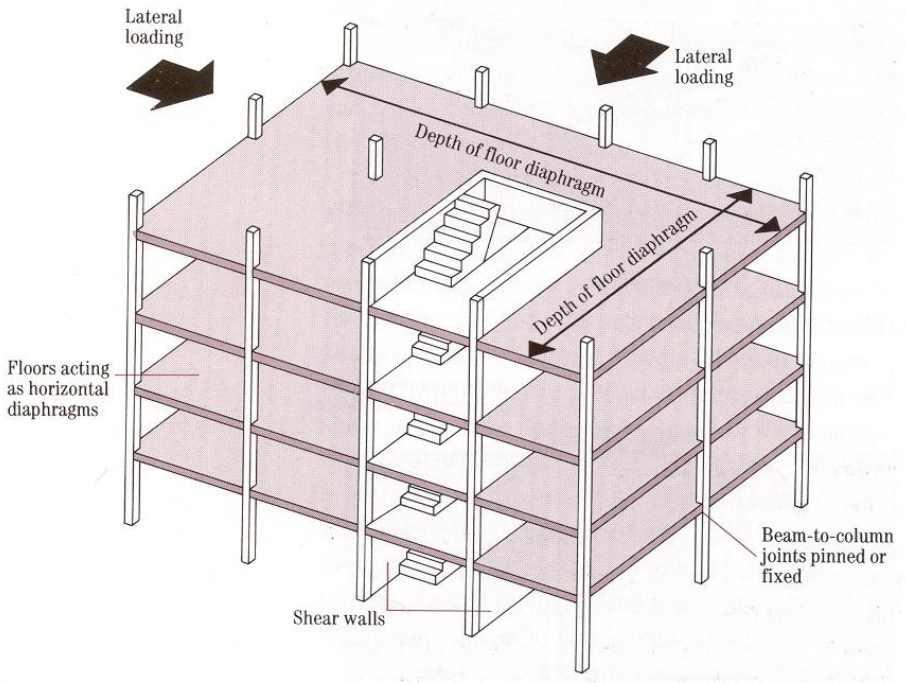


Precast Elements

- Column
- HCS
- Beam
- Shear Walls
- Staircase
- Acotec Partition Wall

Forces Transfer





PRECAST ELEMENTS

Hollow Core Slab

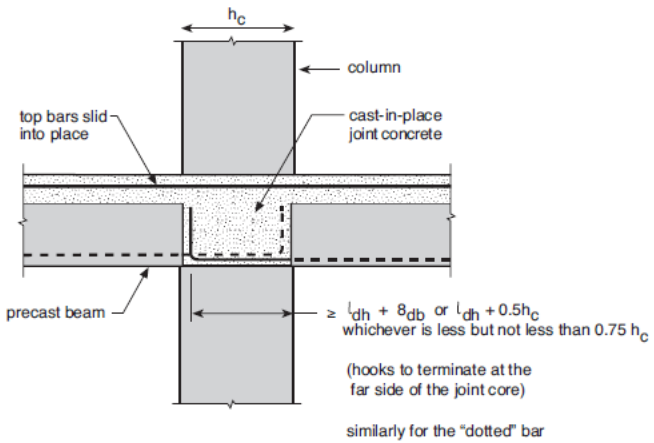
Column

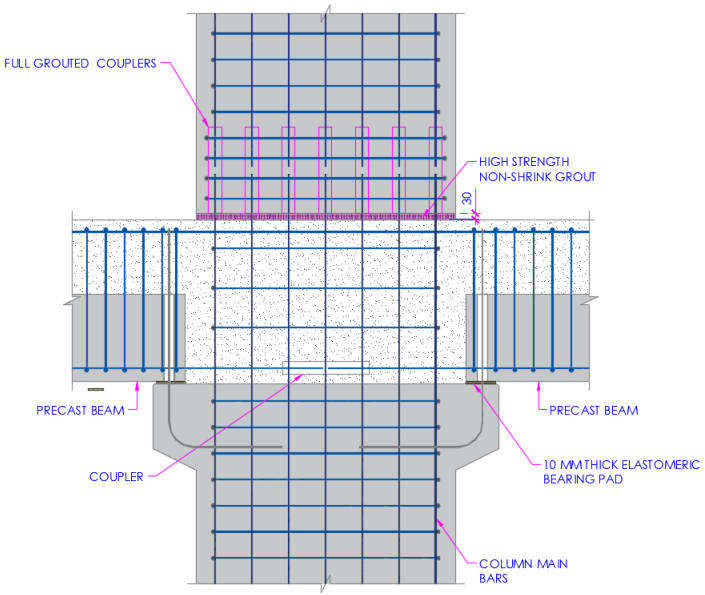
Staircase

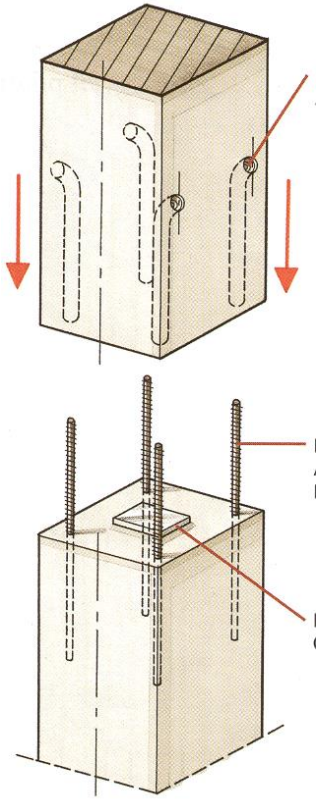
Wall

Beam

CONNECTIONS



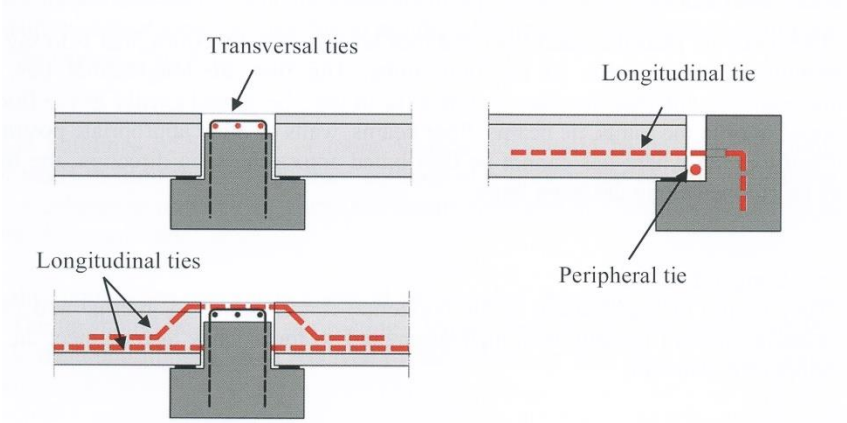


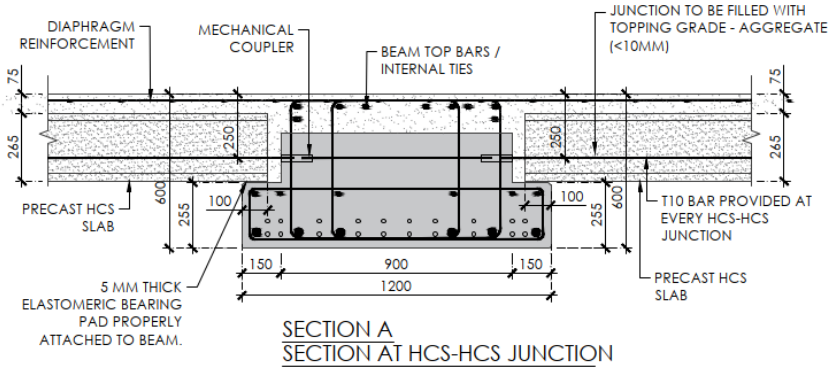


Column to Beam

Column to Column

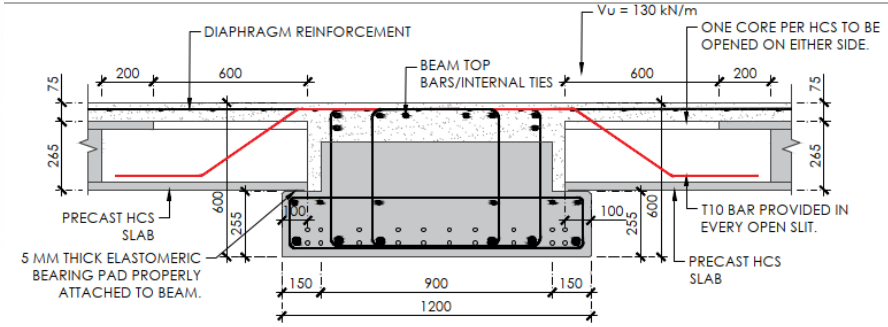
CONNECTIONS





SECTION A
SECTION AT HCS-HCS JUNCTION

SCALE-1:20 | 4

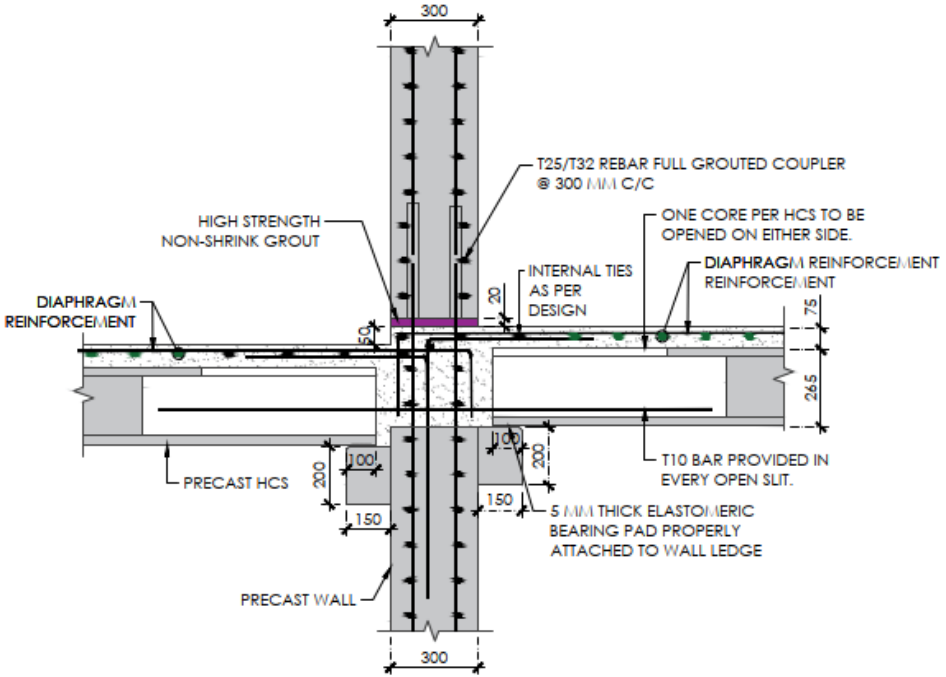


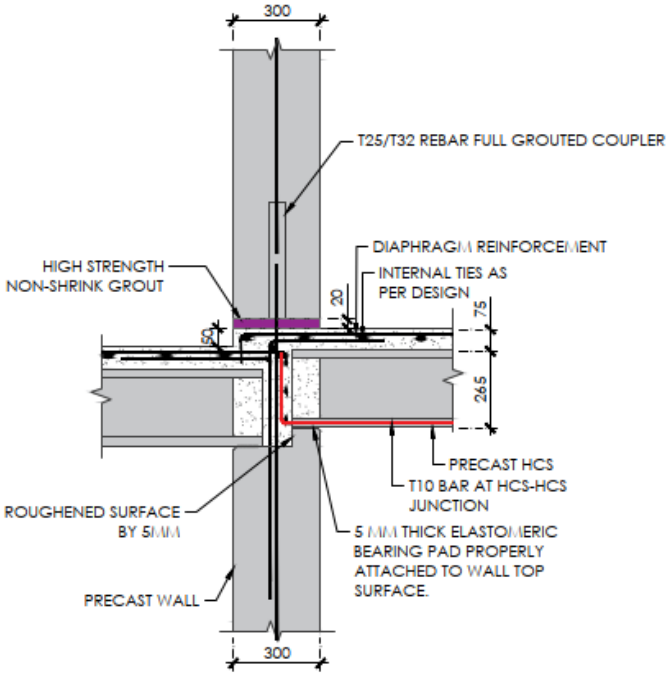
SECTION B
SECTION AT HCS OPEN CORE

SCALE-1:20 | 9

Slab to Beam

CONNECTIONS

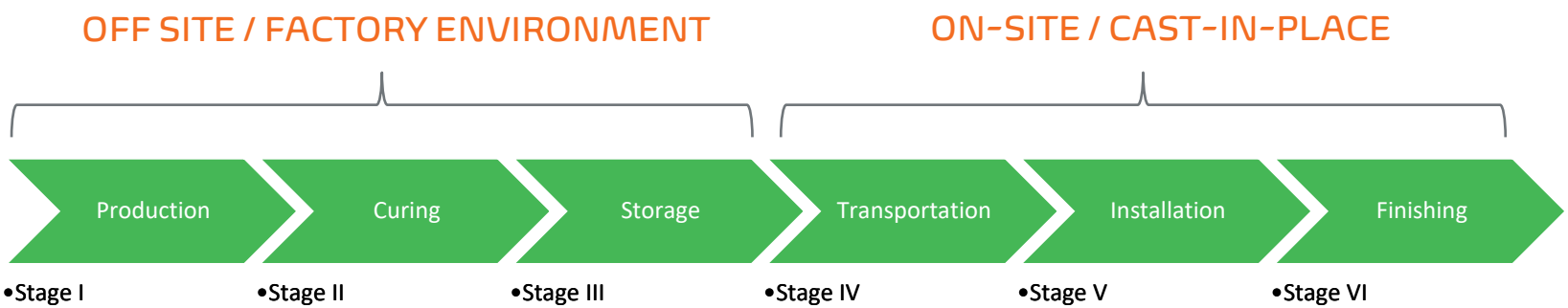




(Wall to Wall) / (Wall to Slab)

PRECAST CONCRETE

- Precast concrete is a construction product produced by casting concrete in either reusable molds or by using highly advanced machinery which is then cured in a controlled environment, transported to the construction site and lifted into place.



OFFICE BUILDING

OFFICE BUILDING

OFFICE BUILDING

WHY PRECAST?

Conventional Construction

Conventional Construction

Conventional Construction (Improved)

Why Precast construction?

Speed (2x)

Low Manpower (<40%)

Economical

Quality

Durable Buildings

Better Design

No wastage

Eco Friendly

Saves Concrete and Steel

- 15-20% savings in Concrete and steel.

Efficient construction

- No Shuttering and Scaffolding Work

Efficient Construction Sites

- Safe Working Conditions at Site
- Immediate Working Platform

Better Quality Buildings

- Longer Life Span of the Building with durability
- Less Maintenance

No Curing required at Site

- No Curing Required at Site
- Elements are Factory Cured, Less Curing Time
- Saves Water and Energy

Low Maintenance & Life Cycle Cost

- Life Cycle Cost in Precast Buildings are Minimal.
- Good for All Extreme Weather Conditions.
- Better Looking and Better Lasting Buildings

Precast competitiveness is based on

Materials

- Better use of raw materials
- Exact mix design
- Less waste
- Pre-stressing vs. R/C

Design

- Design standards, internal standards
- Design by testing

Production

- Better productivity
- Controlled process
- Mechanisation/ automation

Quality

- Better surfaces, less finishing work
- Quality control easy to organize

Bill of Quantity

- Upto 15 storey structure
- Column to column spacing 11.20m
- Moderate seismicity
- Total beam depth 600mm
- Storey Height 4.20m

Precast Vs Conventional for Superstructure (Estimated)			
S. No.	Item	Precast	Conventional
01	Concrete (m3/m2)	0.36	0.42
02	Rebar (kg/m2)	28	45
03	Prestressing Strands	8	0

Note: Conventionally, it's difficult to restrict beam depth to 600mm, especially in end bays.

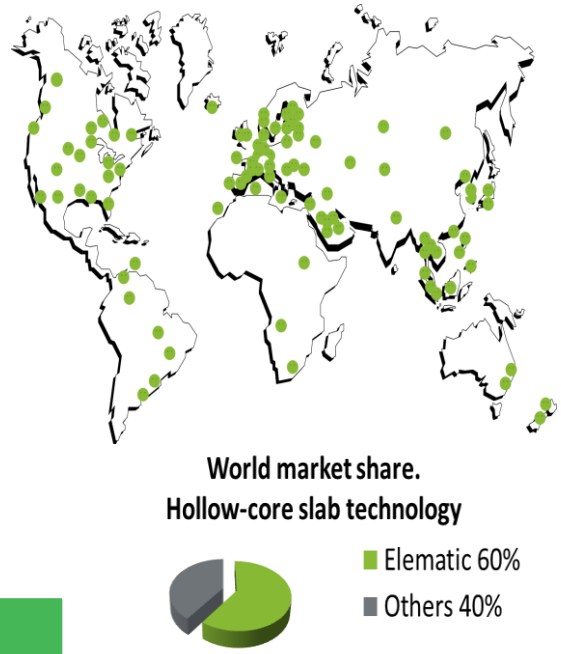
Landmark Precast Project

- **Project: IT Park**
- Project Size: 40 million sq ft
- Location: Hyderabad, India
- 12 Commercial Towers, and large non tower area
- Typical one Tower configuration 7 basements + 34 above ground, Area: 2.5 mnsqft
- Largest commercial precast development ever planned
- 5 mnsqft / year precast construction
- Elematic is providing total precast solution; design, plant supply, and installation

Elematic Facts in Brief

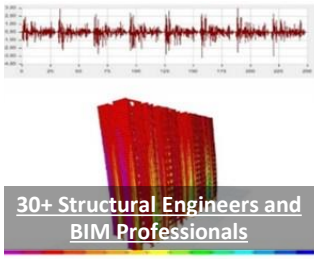
- **Founded 1959**
- **Head office:** Akaa, Finland
- **Production units:** Finland, India and China
- **Customer service centers:** UAE (Dubai), Finland and USA.
- **Subsidiaries and sales offices:** UAE (Dubai), USA, Germany, Hong Kong, Russia, India, China.
- **Representatives:** In over 50 countries

More than 450 Patents and Over 4000 deliveries worldwide to more than 100 countries



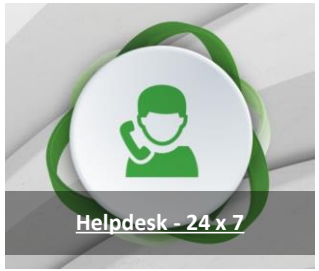
Elematic Offerings


Complete Project Support

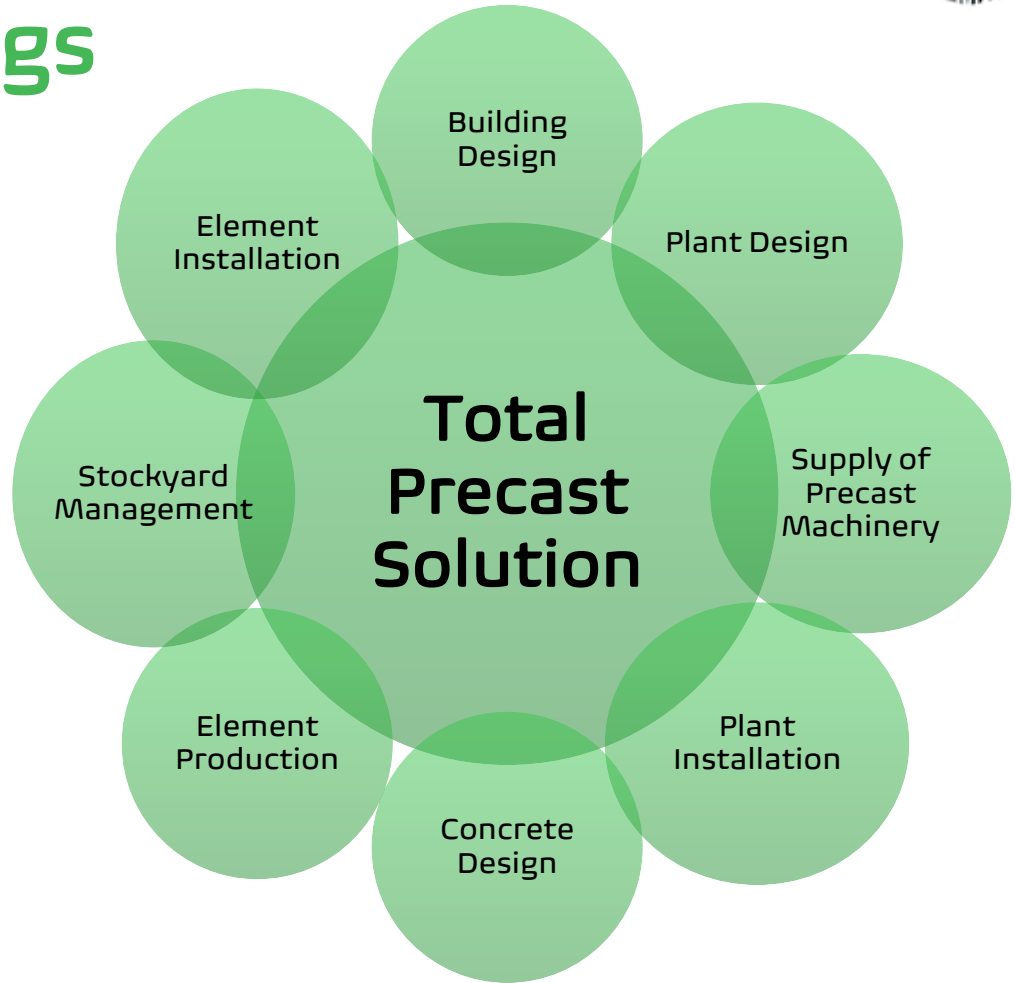

30+ Structural Engineers and BIM Professionals


25 Service Engineers In India

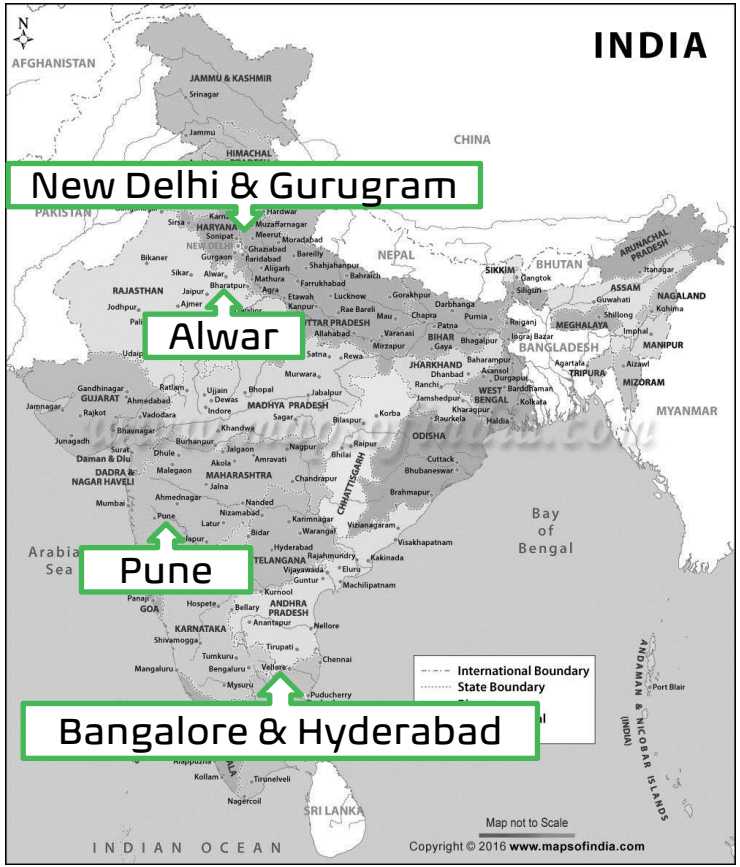

Faster delivery from India Plant


Helpdesk - 24 x 7


Wear and spare parts



India Offices



New Delhi –
- Marketing Team
- Service Team

Gurugram, Haryana -
- Design Team

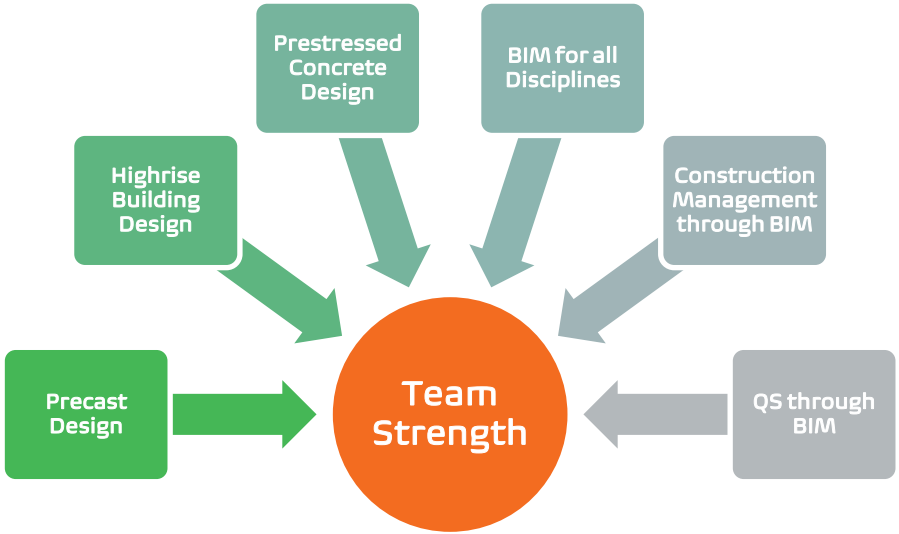
Alwar, Rajasthan –
- Manufacturing Plant
- Spare Parts

Pune, Maharashtra
- Design Team
- Service Team

Bangalore & Hyderabad –
- Marketing Team

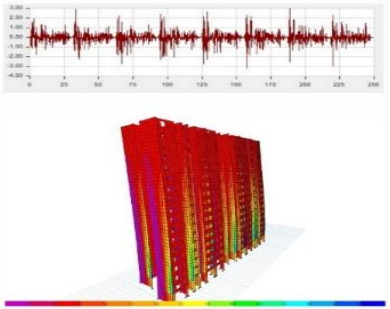
DESIGN TEAM: A SNAPSHOT

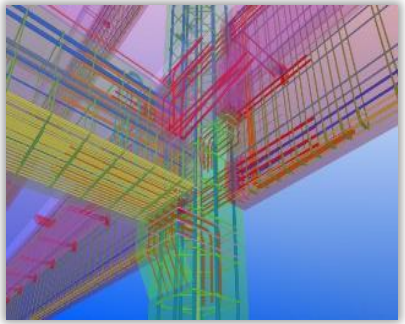
- **EXPERT TEAM OF** Structural Engineers, BIM Modelers (ASMEPF)
- Lead structural engineers are graduate/post graduate from premium colleges (IIT/NIT) and together they bring 40+years of industry experience.
- **TEAM MAJOR EXPERIENCE** is in design and BIM for **precast/cast in-situ RCC and Structural Steel** low to Highrise building projects in India and abroad
- **DESIGN CODE** IS, ACI, EN, NZS, BS



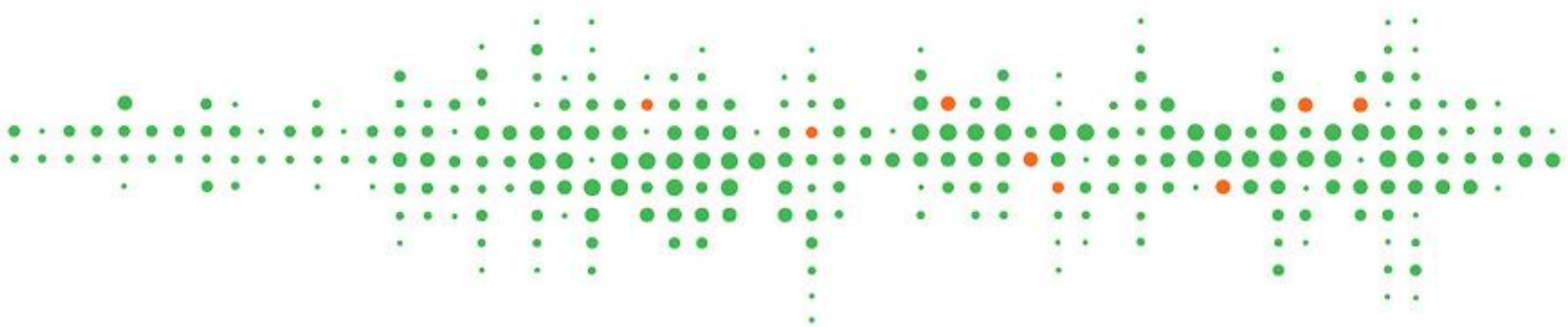
Tools

- Analysis and Design: ETABS, SAFE, STAAD.Pro, SAP2000, Concise Beam
- BIM: Tekla, Revit, Civil 3D





THANK YOU!



www.elematic.com