

## Light weight bricks manufacturing



### **There are two types of lightweight bricks:**

AAC (Autoclave Aerated Concrete) and CLC (Cellular Lightweight Concrete). However, AAC is not suitable for small businesses as the project cost of starting an AAC unit is more than 20 Crores.

CLC manufacturing unit can be started well under Rs. 50 Lakhs and hence considered a better business opportunity for SMEs.

**About CLC:** CLC (*Cellular lightweight concrete*), is made by a process based on making air bubbles in the form of

a foam and mixing it into a cement / fly ash slurry. The slurry is then poured into moulds to form bricks. Finally, the finished product is cured like a normal concrete or **Steamed Cured** with low pressure to achieve early strength. The CLC are best suited for hot climatic regions as it provides 5 times more insulation from heat when compared to normal concrete.

**The raw materials required for CLC are;** Cement + Sand + Fly Ash + Water + Foaming agent + Rebar (Steel). Fly ash is the most important ingredient and CLC contains at least 25% of Fly Ash but not exceeding 33%. Foam is added to slurry made by a foam generator. The mixture is finally put into moulds and left to dry (Cure).

### **Benefits of CLC:**

- **Raw material saving:** No sand or gravel required. Steel bars used in high rises are reduced by half while using CLCs
- **Sound proof:** CLC are sound insulation material and shields inside of the building from noise pollution
- **Less production cost:** It requires less water, cement, sand and power as compared to conventional brick or concrete.

### **Major market players:**

- **Foam Concrete India:** is a Delhi based proprietorship concern which manufactures CLC and related machinery and equipment.
- **Magcrete Building Solutions:** Founded in 2008 Magcrete entered the market with AAC pre cast blocks mainly in Gujarat now has presence in many on-going projects in Mumbai, Rajkot, Indore, Surat, etc.
- **Nanolite Infratech Pvt. Ltd:** Nanolite Infratech was established in the year of 2007 are manufacturers of CLC and also provide technology and turnkey plant setting up services.

**Budget:**

**For CLC plant:** The overall initial capital required for a plant of capacity 30 cubic meters per day is approximately **INR 50 lakhs** including the cost of Plant & machinery around **Rs. 14,54,000.00<sup>1</sup>**.

**Report coverage**

1. Market analysis – Market research on customers views about choosing light weight bricks
2. Location analysis (with a view to source raw material and to reach market)
3. Raw material sourcing from various locations, suppliers, Quotes from suppliers
4. Approvals and Regulatory requirements
5. Competitive landscape and key product profiles
6. Machinery required / Quotes from suppliers
7. Advice on initial viable capacity
8. Capital requirements, profitability
9. Profitability projections for the coming years

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<sup>1</sup> Source: Machinery supplier quotes (inclusive of taxes).