



JK SMART BLOX
Autoclaved Aerated Concrete



A smart choice
for smarter people



EXPERTISE IN MAKING A RANGE OF BUILDING PRODUCTS

JK Lakshmi Cement Limited is a leading company manufacturing a range of building materials. JK Lakshmi Cement, with its promise of “Mazbooti Guaranteed”, is among the top cement brands in the country today. JK Lakshmi Power Mix is the premium offering in the RMC segment being used by a large number of institutional buyers. JK Lakshmiplast is the first branded Plaster of Paris in a market with large presence of unorganised low technology producers.

Its wide network of 70 cement dumps and over 2200 dealers spread across the states of Rajasthan, Gujarat, Delhi, Haryana, U.P., Uttaranchal, Punjab, J&K, Mumbai & Pune and the vast pool of highly trained and dedicated marketing and technical service team helps the Company to service its customers at their doorstep. JK Lakshmi Cement has managed to emerge as a brand name with Mazboot foundations of Trust, Faith and Quality. A Company which has been continuously delivering superior value added products designed to meet the needs of discerning customers.



NOW INTRODUCES  Autoclaved Aerated Concrete

AAC (Autoclaved Aerated Concrete) though is relatively new to India but is a commonly used building material used in walls across Europe, China, Japan, South East Asia, and in the middle east. It was invented by a Swedish architect Johan Axel Eriksson in 1920 as light weight substitute to other building materials. Since then the use of AAC Blocks and Reinforced Panels is continuously growing as an easy, convenient, safer, superior, and environment friendly Green Building material replacing commonly used conventional clay bricks. Many iconic buildings and architectural landmarks such as Burj Dubai, Taipei Trade Tower, Indianapolis University etc. have been built with extensive use of AAC Blocks in walls.

Continuing its endeavour to bring the best in building materials, JK Lakshmi Cement Limited now introduces “JK SMARTBLOX”, which are produced in a state of the art plant using the machinery and technology from HESS, Germany. The highly automated manufacturing process which incorporates the technological innovations such as 'Green Separation' and 'Horizontal Autoclaving' is capable of delivering unmatched consistency in product quality. The unique features of 'Hand Grips' and 'Tongue Groove' profile puts JK SMARTBLOX a generation ahead of others.

The use of “JK SMARTBLOX” in walls replacing conventional clay bricks delivers not only unmatched speed, quality, and economy in construction but also provides life-long benefits such as energy saving, low maintenance cost, long life, safety, health, and hygiene to the users.

SPECIFICATIONS

Parameter	Unit	Values
Size		
Length	mm	600
Height	mm	250
Width	mm	100, 125, 150, 200, 225, 250, 300, 350
Precision (Tolerance)		
Length	mm	± 5.0
Height	mm	± 3.0
Width	mm	± 3.0
Oven Dry Density	Kg/ m ³	551 – 650
High Strength	N/ mm ²	Min 5 (Grade 1)
Compressive Strength Block	N/ mm ²	Min 4 (Grade 1)
Fire Resistance	Hours	2 – 6
Thermal Conductivity Range (k Value)	W/ m-k	Max. 0.24
Drying Shrinkage	mm/ m	Max. 0.05
Sound Absorption	db	40 – 45 for 200 mm wall

EASY, FAST & ECONOMIC CONSTRUCTION

Use of "JK SMARTBLOX" significantly increases (up to 3 times) the speed of construction of walls as compared to any other alternatives used in walls including conventional clay bricks, and yet it delivers unmatched economy in overall construction cost.

• **Smart Size:**

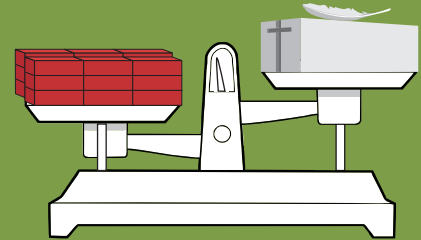
Blocks are big and placing a block is equal to placing of 16 – 18 conventional clay bricks in a typical two brick wall construction. This means less number of joints, less consumption of jointing mortar, and approx. 3 times the speed of construction.

• **Smart Weight :**

The weight of one block is less than 1/3rd of the weight of clay bricks of equivalent volume. Lighter weight means higher labour productivity and lower labour cost per unit of wall constructed. Use of AAC Blocks reduces the load on the structure (Structures designed for AAC Blocks can save on steel & concrete consumption).

• **Smart Dimensional Accuracy:**

Unlike conventional clay bricks which have large variation in shape & size, "JK SMARTBLOX" are cut to the precision of less than 1.5 mm on any side on fully automatic machines. Since each of the side of the "JK SMARTBLOX" are truly square and perpendicular to each other, it delivers a true, plain and perfect wall surface, and thus reduces the thickness of levelling plaster by half. It obviously means faster construction at lower cost.

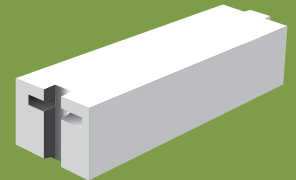


Smart Size & smart Weight

Conventional Clay Brick



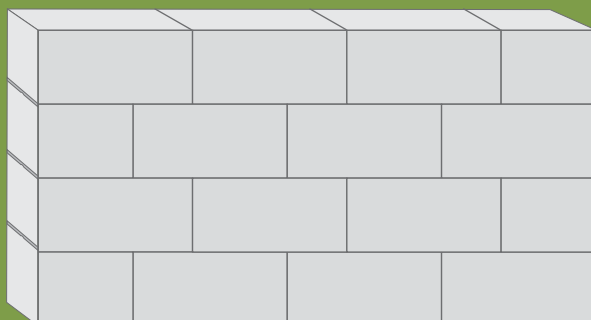
JK SMARTBLOX (with Tongue & Groove Feature)



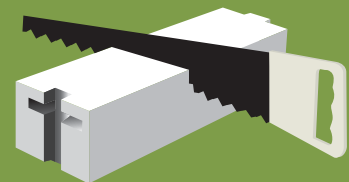
Smart Dimensional Accuracy



Clay Brick



JK SmartBlox



Can be cut like wood

Upto 3 times faster construction



Fire resistant



Termite resistant



Earthquake safe



Noise reduction

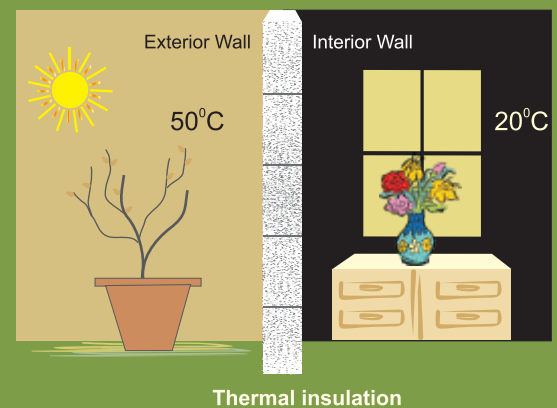
SAFER & HEALTHIER INTERIORS WITH LONG LIFE

The buildings which use “JK SMARTBLOX” are safer and healthier for its occupants due to various inbuilt features which are not found in any other wall construction materials including clay bricks. This makes “SMARTBLOX” as smart & best choice for building walls in any type of building construction

- **Fire Resistance:** “JK SMARTBLOX” offer 3 times or more fire resistance (2 to 6 hours) than conventional clay bricks. This means that the fire does not spread fast and allows sufficient time for the safe evacuation of occupants.
- **Moisture Resistance:** “JK SMARTBLOX” do not have any 'micro-pores' or continuous 'capillaries' through which exterior surface water can be absorbed to interiors. It means longer life to the paints and interiors free from growth of any kind of fungus, providing healthier and long lasting interiors to the occupants.
- **Pest & Termite Resistance:** The inorganic nature of “JK SMARTBLOX” does not allow spread of termites and growth of pests and hence provides longer life to expensive wooden interiors.
- **Earthquake Resistance:** When devastating earthquake hit Kobe region in Japan in 1995, the buildings constructed with AAC Blocks proved safer as the damage to the structure was minimum and AAC Blocks did not allow the fire to spread. Since buildings & structures which use AAC Blocks are lighter, they absorb and transmit less seismic forces in event of any earthquake and provide additional safety to the occupants. “JK SMARTBLOX” conform to the requirements of seismic zone IV & V.
- **Sound Insulation:** The cellular structure of “JK SMARTBLOX” provides superior sound insulation for same thickness of wall as compared to conventional clay brick wall. What it means is that the sound does not travel from one part of the building to another and if there is a party in one room; there may be someone with sound sleep in the adjoining.

LIFE LONG ENERGY SAVING

JKLC “SMARTBLOX” provide superior thermal insulation as compared to any other wall construction material including conventional clay bricks. Buildings constructed with use of “JK SMARTBLOX” in walls consume 25 – 30% less energy in Heating, Ventilation, and Air – Conditioning (HVAC).



ADDITIONAL GREEN BUILDING POINTS UNDER LEED/ GRIHA RATING SYSTEM

Use of “JK SMARTBLOX” can fetch additional LEED or GRIHA rating points for Green Buildings as the making of JK SMARTBLOX” consumes less natural resources and energy as compared to conventional clay bricks or other wall construction materials.

- **Recycled Materials:** Unlike clay bricks, making of which uses top fertile soil, the “JK SMARTBLOX” use fly ash generated in abundance by thermal power plants and thus use of these helps in conserving of top fertile soil, essential for the food security of the nation.
- **Less Natural Resources:** The making of “JK SMARTBLOX” consumes just 1/4th of the weight of materials consumed in making of clay bricks.
- **Less Energy:** “JK SMARTBLOX” not only consume less fossil fuels in making but also consume less energy in transportation due to lighter weight.
- **Less Water:** Unlike clay bricks which are required to be soaked in water to remove slit, salts, and organic substances, the “JK SMARTBLOX” require just wetting by brush on surface before use. They also do not need any curing and hence save on precious water.



Eco friendly product

SMART VALUE* FROM JK SMARTBLOX

The 'Smart Value' package is especially designed for smart users who want the best from the use of "JK SMARTBLOX" and it includes

- **Smart Expertise:**

Advice from well qualified and experienced architects can be provided to those users who wish to design their buildings to take the maximum advantage from the use of "JK SMARTBLOX".

- **Smart Tools:**

Use of right tools makes construction even more easy, convenient, and economically smart.

- **Smart Mortars:**

Use of thin joint specially formulated mortars can reduce the joint thickness to less than 5 mm and significantly increase the speed of construction and reduce water consumption in curing.

- **Smart Plasters:**

The wall surface can either be finished by specially formulated sand cement plaster on both sides or on

Comparison between Alternative Walling Materials

Parameter	JK SMARTBLOX	Clay Bricks	Advantages of Using JK SMARTBLOX
<i>Common Size (LxHxW) in mm</i>	600 x 250 x 100 –350	210 x 70 x 90 –100	<i>Faster construction, more floor space & savings on labour and jointing mortar</i>
<i>Dry Density (Kg/ m³)</i>	550 –650	1900 –2300	<i>Up to 15% savings in cost of structure</i>
<i>Precision (Tolerance) in mm</i>	± 3 to 5	± 10 to 15	<i>Even wall surface, savings on plaster and labour</i>
<i>Thermal Insulation in W/ m-k</i>	Max. 0.24	0.81	<i>25 – 30% less electricity consumption on HVAC</i>
<i>Noise Transmission/ Sound Insulation in db</i>	40 – 45 db for 200 mm wall	40 db for 230 mm wall	<i>Quieter interiors</i>
<i>Green Building Points</i>	Yes	No	<i>Carbon credits & higher occupancy in commercial buildings</i>
<i>Water Absorption</i>	<i>No micro-pores and capillaries</i>	<i>Suction through capillary action</i>	<i>Long life of paint and healthy interiors</i>
<i>Fire Resistance in Hours</i>	2 to 6	2	<i>Increased safety for occupants</i>
<i>Earthquake Resistance</i>	<i>Conformance to requirement of seismic zone IV & V</i>	<i>Conditional Conformance</i>	<i>Increased safety for occupants</i>
<i>Termites & Pest Resistance</i>	<i>High</i>	<i>Low</i>	<i>Long lasting & healthy interiors</i>
<i>Workability</i>	<i>Easy</i>	<i>Difficult</i>	<i>Can be used to create arches, curves etc.</i>
<i>Manufacturing Process & Quality Consistency</i>	<i>Fully automatic & high consistency</i>	<i>Fully manual and high variability</i>	<i>Reliable product performance</i>
<i>Wastage due to breakage</i>	<i>Negligible</i>	10 –12%	<i>Economic construction</i>
<i>Water Usage in construction</i>	<i>Low, needs only surface wetting before use</i>	<i>High, needs curing before use</i>	<i>Faster & economic construction</i>
<i>Availability</i>	<i>Any time during the year</i>	<i>Seasonal</i>	<i>Less storage space, peace of mind, and in time completion of construction</i>

* available at select Plant only



JK SMART TOOLS

A range of modern day, customized tools make working with JK SMARTBLOX more easy and efficient



CHASING TOOL



HANDSAW



MIXING PADDLE



NOTCHED TROWEL I



RUBBER MALLET



SANDING RASP

JK SMARTBLOX

Autoclaved Aerated Concrete

JK LAKSHMIPLAST
PLASTER OF PARIS

JK LAKSHMI
CEMENT



JK LAKSHMI
Power Mix
READY MIX CONCRETE



Website: www.jklakshmicement.com



facebook.com/JKLakshmiCementLtd



twitter.com/JKLOfficial

MARKETING OFFICES:

Delhi / NCR - Milap Niketan, 8A, Bahadur Shah Zafar Marg, New Delhi - 110002
Ph.: 011-30179882, 9958980290, 9810993760, 9599934357 | e-mail : misaac@jkmail.com

Ahmedabad - 304, Dev Arc, Iskon Circle, S.G. Highway, Satellite, Ahmedabad -380 015
Ph.: 079-6609 5100, 6609 5136, 6609 133 | e-mail :lc_ahd@lc.jkmail.com

Udaipur - 23A, Fatehapura Near Income Tax Office, Udaipur
Ph.: 0294-2560649, 2415781 | e-mail : lcudaipur@lc.jkmail.com

Customer Care :- 18001025097