

THE NEXT BIG SHIFT

IN WALL CONSTRUCTION

AAC WALL PANELS



TECHNOLOGY ROAD MAP

1st

Generation



Red Clay
Brick

2nd

Generation



AAC
Blocks

3rd

Generation



AAC Wall
Panels

Magicrete AAC Wall Panels are **lightweight, steel-reinforced** drywall solutions designed for both **internal and external wall** erection. Engineered for maximum speed, these **full-height panels** feature **tongue-and-groove edges** for **rapid, seamless installation**.

Fully **IS 6072 compliant**, they provide **superior fire safety, sound insulation, and earthquake resistance** - all while weighing just **1/5th of traditional concrete panels**.

All The **Magical Features** of AAC Blocks and More...



**4X
FASTER**
Construction



LIGHTWEIGHT
Yet
Heavy Duty



Corrosion-Protected
**STEEL
REINFORCED**



Excellent
**THERMAL, FIRE &
ACOUSTIC**
Performance

ADVANTAGES



Cost Effective

Save upto 15% in Foundation cost



Building using Bricks

Building using AAC Products



Wall Installation Speed

Bricks Vs AAC Blocks
Vs AAC wall Panel

Wall installation
(1 Mason + 2 Helpers)



Red clay brick

AAC Blocks

AAC Wall Panels



Thermal Control

Day time exterior temperature 33°C

Night time exterior temperature 20°C



Buildings use ~30% less energy for cooling and heating due to superior insulation.



Fire Resistance

Magcrete AAC Wall Panel provides a fire rating of 4 hours for Thickness of 100 mm. This makes it one of the best building materials available in the market.

Thickness (mm)	75	100	120	150	200
Fire rating (hours)	3	4	5	6	8



Acoustic Insulation

Magcrete AAC Wall Panels provides extraordinary defense against noise pollution. The sound reduction index is more than 40 dB.

Thickness (mm)	75	100	120	150	200
STC rating (dB)	40	43	44	46	48

- With 3-4 mm skim coat
- For 52 dB, install gypsum board (12.5mm) with stud framing on both sides.



Space Saving

Option of choosing slimmer internal walls at 75mm, instead of 100mm, results in a 2% increase in floor space, offering a more efficient option.



Durable

Absorbs strong impacts. Withstand harsh weather conditions without cracking.

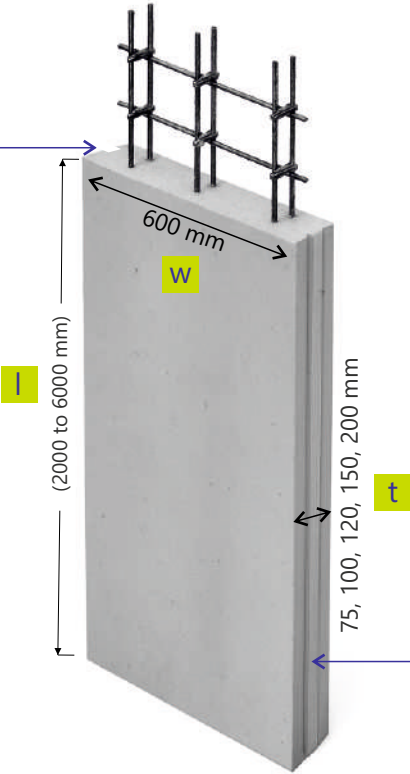


Easy & Fast Installation

It is easy to chisel, cut & core the AAC Panel, as per requirement.

DIMENSION & PRODUCT DETAILS

GROOVE



TONGUE



Parameter	Values				
Thickness (mm) (t)	75	100	120	150	200
Width (mm) (w)	600	600	600	600	600
Length (mm) (l) (interval of 100 mm)	2000 - 3000	2000 - 4000	2000 - 4800	2000 - 6000	2000 - 6000
Number of steel reinforcement	1 or 2	2	2	2	2
Tongue and Groove	Yes	Yes	Yes	Yes	Yes

MATERIAL PROPERTIES

Parameters	AAC Panels
Key Components	Cement, Lime, Fine Silica Sand & Aeration Agent
Dry Density	550-650 kg/m ³
Compressive strength	>3.5 N/mm ²
Weight	55 kg/m ² (75mm) 70 kg/m ² (100 mm)
Fire Resistance	4 Hrs (100 mm wall)
Thermal Conductivity	<0.16 W/m.K
Modulus of Elasticity	2190 Mpa
Sound Reduction Index	43 dB (100 mm)

Conforms to BS 5234: Part 2: 1992

Impact Test (75mm, 100mm, 120mm, 150mm, 200mm thickness)	Performance Achieved
Door Slam	SD
Large Soft Body Impact	SD
Light weight Anchorage - Pull Out	100N
Light weight Anchorage - Pull Down	250N
Heavy weight Anchorage - Wash Basin	1500N
Heavy weight Anchorage - Wall Cupboard	4000N

*SD - Severe Duty

TECHNOLOGY COMPARISON



Parameters	PUF Panel	Dry Wall	Sandwich Panel	AAC Wall Panels
Dimension Limitations	Thickness - upto 150mm Height - upto 3m	Thickness - upto 100mm Height - upto 2.4m	Thickness - upto 100mm Height - upto 3m	Thickness - upto 250mm Height - upto 6m
Speed of Installation (1 Mason + 2 Helpers)	50-70 m ² /day	40-50 m ² /day	60-70 m ² /day	70-80 m ² / day
Fire Rating	1 Hours (100 mm)	1 Hour (100 mm)	2 Hours (75 mm)	4 Hours (100 mm)
Thermal Conductivity	0.03 W/(m·K)	0.25 W/(m·K)	0.21 W/(m·K)	0.16 W/(m·K)
STC Rating (Sound)	30 dB (100 mm)	40 dB (100 mm)	35 dB (100 mm)	43 dB (100 mm)
MEP Compatibility	Poor	easy concealment	Poor	Excellent concealed chases possible
Impact Strength	Low	Moderate	Moderate	High
Sustainability	Low (non-biodegradable)	Low (petrochemical core)	Moderate	GRIHA & IGBC Certified

PROJECT GALLERY

**STT GDC India,
Pune**

Data Center



**Adani Connex,
Pune**

Data Center



**Lumina CloudInfra,
Mumbai**

Data Center



CtrlS, Mumbai

Data Center



TCS, Pune

Commercial IT Park



Foxconn, Chennai

Industrial Facility



CapitaLand, Pune

Commercial
Business Center



**Euro School,
Bangalore**

Educational Institute



PROJECT GALLERY

DLF Midtown, Gurgaon

Residential



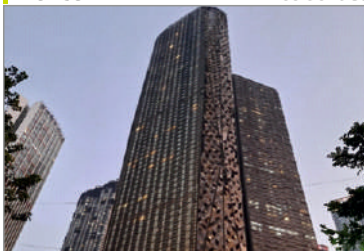
Avior Up Life, Pune

Premium
Residential



Lodha World Towers, Mumbai

Luxury
Residential



India Potash Limited, Gurgaon

Warehouse



Stamford Warehousing, Pune

Warehouse



United Phosphorous Ltd, Dahej

Industrial
Estate



TajSATS Mopa Airport, Goa

Hospitality



NHSRCL, Vadodara

Infrastructure



FASTENERS

	Load	Max Weight per Point	Fastener Size	Application	
	Light Duty	upto 2 kg	Ø3 mm X 40 mm	<ul style="list-style-type: none"> • Photo Frame • Mirror Wall Clock • Clothing Hook 	
	Medium Duty	upto 10 kg	Ø3 mm X 40 mm	<ul style="list-style-type: none"> • Curtain Rail System • Wall fan Framed • Painting Large Mirror 	
		upto 50 kg	Ø8 mm X 80 mm	<ul style="list-style-type: none"> • Clothing Hook • Light Fittings • Small Bathroom Fittings • Air Conditioning indoor Unit • CCTV Camera 	
 	Heavy Duty	upto 100 kg	Ø10 mm X 100 mm	<ul style="list-style-type: none"> • Wall- Hung Cabinet Shelf • Wash Basin • Urinal Fittings • Towel Racks • Residential DB Box • Air Conditioning Outdoor Units • Large TV screen 	 
 Chemical Anchor System (Drilled Hole)	Severe Duty	upto 150 kg	Chemical Anchor System	<ul style="list-style-type: none"> • Industrial Heavy Electrical- DB Fire Hose Reel • Large Signboard • Non-Cantilever Awning 	

*Recommended brands: Klimas, Hilti, Candorr

INSTALLATION INSTRUCTIONS



Ensure the floor and ceiling are free of dust before marking layout lines with chalk.



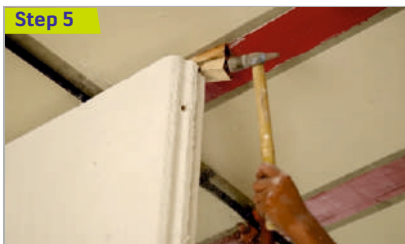
Apply 1:4 sand-cement mortar to level the floor surface before installing the panel



Drill two 40mm deep, 8mm diameter holes at the marked locations on the column and insert 8mm x 80mm dowel bars.



Lift the wall panel and push it firmly to attach it to the column.



Secure the Magicrete AAC panel to the column and insert wooden wedges underneath.



Use GI L-clamps and fasteners to fix the panel to both the floor and the roof.

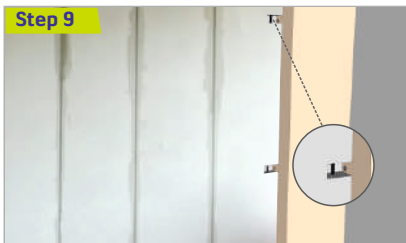


Apply Magicrete Block joining mortar to the side of the panel as required.



Lift the next panel into place and repeat steps 6 and 7.

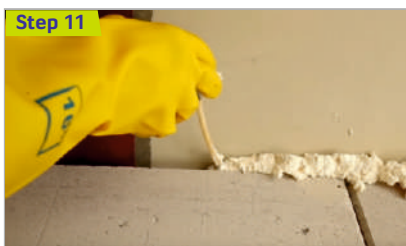
INSTALLATION INSTRUCTIONS



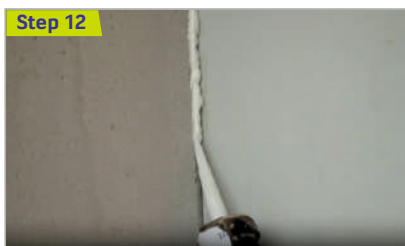
Carve two slots for dowel connections at the end column or use GI slotted L-angles.



Apply glass fiber tape to panel joints and cover with polymer-based putty.



Fill any gaps between the beam/slab top and the panel with PU foam (backed by backer rod); remove any excess.



Apply PU sealant to all vertical control joints and end gaps.

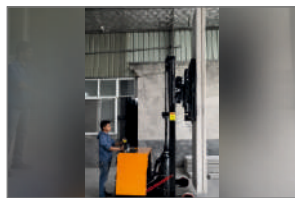
PANEL HANDLING INSTRUCTIONS



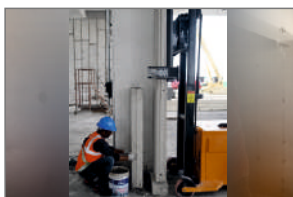
Step A
Panel lifting



Step B
Panel transport



Step C
Panel vertical tilting



Step D
Panel installation



Step E
Panel alignment

PANEL CUTTING INSTRUCTIONS

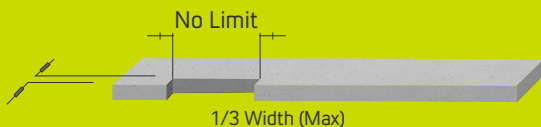
Cross Cut



Diagonal Cut



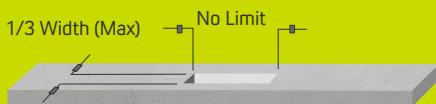
Notch Cut (Field Cut)



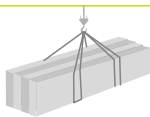
Ripping - Fitted Panel



Opening (Field Cut)



ACCESSORIES



Slings



Crow Bar



Hammer



Rubber Hammer



Plumb Line



Drilling Machine



Electrical Stirrer



Ladder



Panel Handling Machine



Dowel



PU Foam



Backer Rod



Wooden Wedges



Fibre Mesh Tape for Flat Joints



Notch Trowel



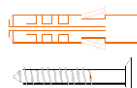
Small Hand Brush



Panel Cutting Machine



GI Angle



Fasteners for
Magicrete Wall Panels



Sand Paper #200



Thin Bed Mortar

ESTEEMED CLIENTELE



Common Site Concerns → Magicrete AAC Wall Panel Solutions

Problem Seepage in walls, especially in wet areas

Solution Magicrete AAC Wall Panels feature a **cellular structure with closed, finely dispersed air pockets**, which significantly **restricts water penetration**.

Problem Cracks due to settlement or structural movement

Solution The system uses **mechanical fixings, flexible joints**, and fiber mesh at panel joints, ensuring crack-free performance even under movement.

Problem Loss of usable carpet area due to thick masonry walls

Solution AAC Wall Panels reduce carpet area loss with **75 mm thin, steel-reinforced walls** that replace bulky masonry. They deliver **thermal efficiency, acoustic comfort, and fire safety** while maximizing usable space.

Problem Hesitation to adopt a new walling system

Solution AAC Wall Panels are a **globally proven system**, extensively used across **Europe, Australia, China, Thailand**, and parts of South Asia, with a strong track record in large-scale projects.

Problem Poor finishing quality and time-consuming plaster work

Solution Panels are **factory-finished and dimensionally accurate**, requiring **minimal finishing** and enabling **faster, smoother wall surfaces**.

Problem Difficulty in electrical and plumbing modifications on site

Solution Panels can be **cut, chased, drilled, or modified** on site using standard tools **without compromising structural integrity**. Chiseling these panels is as easy as working with AAC blocks.

Problem Slow wall construction affecting project timelines

Solution AAC Wall Panels enable up to 16× faster installation than brickwork. The tongue-and-groove joint system ensures high productivity with consistent quality.

magicrete®

magic behind happy homes



Magicrete Building Solutions Pvt. Ltd.

(ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified co.)

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