

**BUILDING**  
**BRICKS**

**AAC BLOCKS**

(AUTOCLAVED AERATED CONCRETE BLOCK)

**AMARAVATHI INFRA PROJECTS**

[www.buildingbricksvizag.com](http://www.buildingbricksvizag.com)



## About us

Amaravathi infra projects, Estd. in 2009 is a pioneer in manufacturing of light weight concrete blocks(AAC) in Northern coastal region of Andhra Pradesh from past 10 years, we were founded with a vision of introducing Eco-friendly, sustainable & Efficient bricks to cater the needs of this region, we have regarded as a frontline manufacturer of light weight concrete blocks (AAC) with state of the Art manufacturing unit located in the outskirts of Visakhapatnam, Strategically covering Visakhapatnam, Vizianagaram and Srikakulam markets with sheer dominance in Quality and value for money aspects with experience of over 3 Lakh cubic-meters and counting till date.

## Our Mission

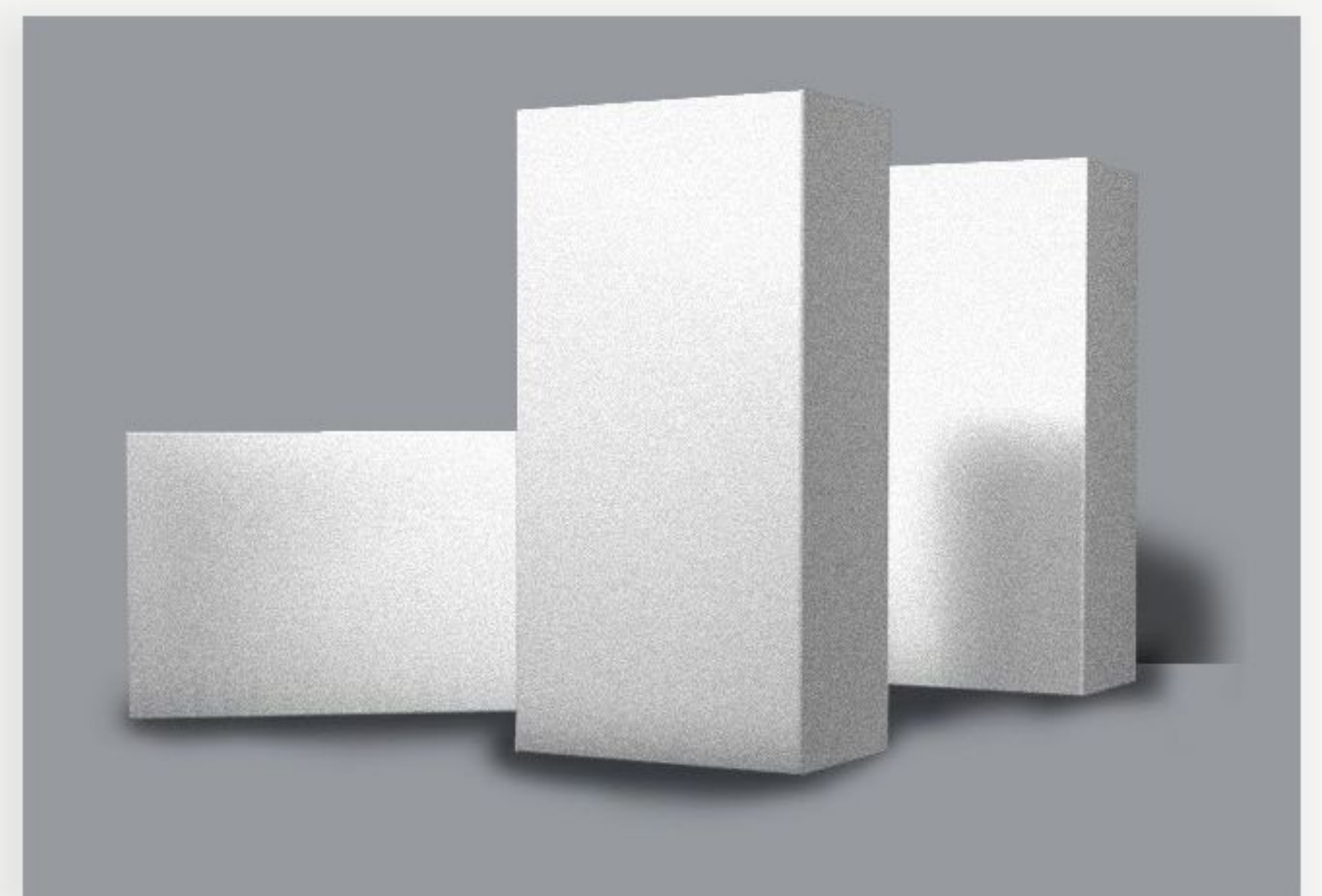
Our mission is to provide Sustainable, Eco-friendly and Efficient "AAC Bricks" to contribute for the development of "Smart city" Visakhapatnam along with other neighbouring cities.

*"V. Purna Chandra Rao"*

*Managing Director, Amaravathi Infra Projects*

## About AAC

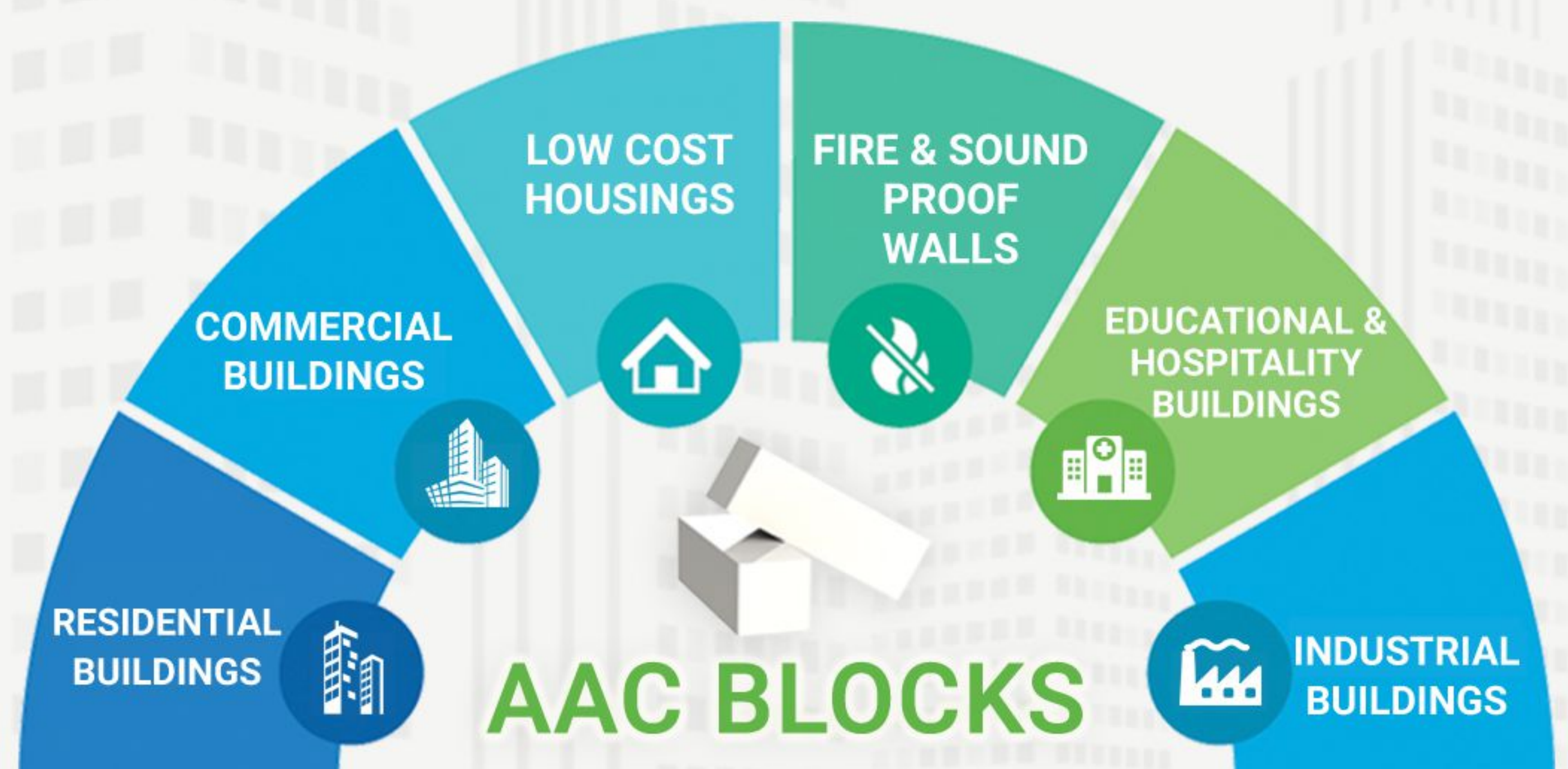
AAC blocks also known as Autoclaved Aerated Concrete Blocks or Light Weight Concrete Blocks, which are widely used in construction. AAC blocks are extremely light in weight and easy to install, nail, drill and cut for pipes & conduits. AAC blocks are manufactured by mixing of flyash, cement, lime, gypsum and aluminum powder, which later cut in to required dimensions, cured in a high temperature and high pressure autoclave.



## Advantages of AAC Blocks



## Applications of AAC Blocks





## Available Sizes

Dimension of AAC Block(L x H x B)		
600 Length	500 Length	300 Length
600*200*100 MM	500*200*100 MM	300*200*100 MM
600*200*125 MM	500*200*125 MM	300*200*125 MM
600*200*150 MM	500*200*150 MM	300*200*150 MM
600*200*175 MM	500*200*175 MM	300*200*175 MM
600*200*200 MM	500*200*200 MM	300*200*200 MM
600*200*225 MM	500*200*225 MM	300*200*225 MM
600*200*250 MM	500*200*250 MM	300*200*250 MM
225*150*75 MM(9*6*3)      225*100*75 MM(9*4*3) Red Brick Size		

**Note :** Sizes can be customised according to client's requirements.

## Specifications

Product Specifications	Units	Capacity
Length	mm	600/500/300/250
Height	mm	200
Thickness	mm	75, 100, 125, 150, 175, 200, 225, 250
Compression Strength	N/mm <sup>2</sup>	>4 (As per IS : 2185 Part III)
Normal Dry Density	Kg/m <sup>2</sup>	*550-950
Thermal Conductivity	W/mk	*0.24
Sound Reduction	Db	*Upto 42
Fire Resistance	Hrs	*4
Dry Shrinkage	%	*0.04

## Cost Effectiveness

Cost Component	Saving in Component	Estimated Impact on Project Cost	Explanation
Mortor Material	60%	2%	AAC Blocks are 7 times the size of conventional bricks, resulting in 1/3rd the number of joints. Thus an overall mortar savings upto 60%
Plastering Material	35%	2%	Exceptional dimentional accuracy & smooth surfaces, eliminates need of three coat plaster walls & allows for a final 6 mm skin coat (putty/gypsum plaster)
Wastage	10%	0.5%	Breakage in Bricks might be as high as 15% which in case of AAC Blocks it is less than 3%
Structural Material (Steel & Concrete)	20%	8%	Being Light Weight, AAC Blocks drastically reduce the dead weight of the building. This translates to design of lighter structures leading to reduction in steel and concrete (upto 20%)
Increase in Floor space Area	2%	2%	Being to exceptional thermal insulation & weather barrier properties, its possible to use thinner blocks, which results in increase of carpet area.
Savings in Capex for HVAC Systems	30%	0.50%	AAC Blocks have excellent insulation properties, which results in saving in capex & opex of HVAC Systems.

Total Impact on Project Cost      \*15%





## Technical Comparison of AAC Block & Red Clay Brick

Parameter	AAC Blocks	Red Clay Bricks
Basic raw materials & other inputs	Cement IS-12269,18-8112, StandIPFA4S-383, High Quality Lime IS-712. Gypsum, Water - IS-456, Fly Ash-IS-3812 (7-1) & aluminum as aerating compound	Top Soil & Energy
Dry Density kg/m <sup>3</sup>	550-950 kg/m <sup>3</sup> (dry over)IS-2185 (PT-3)	1900 kg/m <sup>3</sup>
Compressive Strength in Kg/cm <sup>2</sup>	30-55 kg/cm <sup>2</sup> -, IS-2185 (PT-4)	40-75- kg/cm <sup>2</sup>
Aging	Gains in strength with age	No gain in strength with age
Thermal Conductivity(W/m.k.)	0.24 W/m.K. (for 551 - 850 kg/m <sup>3</sup> )	0.81 W/m.k.
Sound Insulation	Superior than burnt clay & hollow concrete	Normal
Ease of Working	Can be cut, nailed & drilled	Normal
Fire Resistance	410 6 Hours (depending on thickness)	2 Hours
Sound Reducing Index	45 db for 200mm thick wall	50db for 230mm thick wall, for the frequency ranging from 200 to 2000 Hz
Pest & Rodent Resistance	No fungus & algae germination due to non organic properties	Algae Susceptible
Process	Casting-rising-Precuring-IS-456, IS-2185 (PT-4)	Moulding hear treatment
Pre-cast Brick size	600x200x75 To 300mm-IS-2185{PT-3,4}	230x100x70 mm
Pre cast elements	Any size of elements	Not feasible
Water Absorption % by weight	Less than 20% by volume -IS-2185 (PT-3)	20% by volume
Drying Shrinkage mm/meter	Shrinkage after maturing 0,011 (for 600 kg/m) IS-2815 (PT-3)	No shrinkage
Productivity	Output 100% more than brick work	Normal
Eco Friendliness	Pollution free, normal energy requirement, open process uses fly ash or sand lime	Creates smoke, uses high energy, wastes agricultural land
Structural saving due to dead weight reduction	55% reduction in weight of walls-Tremendous structural saving for high rise buildings in earthquake / poor soil area	Na additional saving
Delivery	Pre-Cured and ready for delivery-IS-456	Seasonal
Automization	Automated manufacturing process-accurate design mix	Manual
Labour involvement for 10x10 ft wall	1 Labour	2 Labours
Construction Speed	Very high due to bigger size, light weight	Comparatively lower
Quality	Uniform and finished	Normally varies

\* Actual values May vary

# AMARAVATHI INFRA PROJECTS



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