



Delivering World-class Lightweight Solutions

Starken®

Autoclaved Aerated Concrete

Product Guide



ADVANTAGES OF AUTOCLAVED AERATED CONCRETE

Sound Resistant

Scientifically proven to provide better insulation to sound transmitted by air compared with other solid building materials.



Durable

History of usage dated more than 50 years protecting building envelopes and remain durable even under extreme weather conditions.



Fire Resistant

More superior than traditional masonry for products with fire resistant up to 4 hours for a nominal block thickness of 100 mm.



Dimensional Accuracy

Blocks and panels are manufactured under factory environment using state-of-the art modern machineries resulting in products with tighter dimensional tolerances.



Cost-effective

Speed and ease of installation result in cost savings compared to traditional masonry construction.



Impact Resistant

Wall erected using 100 mm thick AAC products is classified as "Severe Duty" grade and able to withstand impact loads potentially resulting from rough usage.



Good Workability

Starken AAC can be easily sawn, cut, carved, nailed or drilled using ordinary hand tools.



Thermal Comfort & Energy Saving

Starken AAC's excellent thermal insulation properties result in improved comfort level and saves heating and cooling costs.



Lightweight

Starken AAC density is about one-fifth of that of normal concrete blocks, making it easily handled.



Water Resistant

Starken AAC contains millions of closed microscopic cells which strongly resist moisture from passing through.



Eco-friendly

Starken AAC to help reduce at least 30% of environmental waste, decrease 50% of greenhouse radiation and over 60% integrated energy on the surface of brick.



AAC products are made using slurry mix containing cement, sand, lime and aerating agent. The slurry is poured and moulded to form lightweight blocks, panels and lintels upon which are cured in autoclave. The high-pressure steam-curing mechanism in the autoclave facilitates the curing process of the moulded lightweight concrete, producing physically and chemically stable products that weigh about 1/5 of normal concrete. AAC products contain millions of tiny non-connecting air pockets yielding superior thermal insulation property. AAC products are typically installed to form walls, floors and roofs.

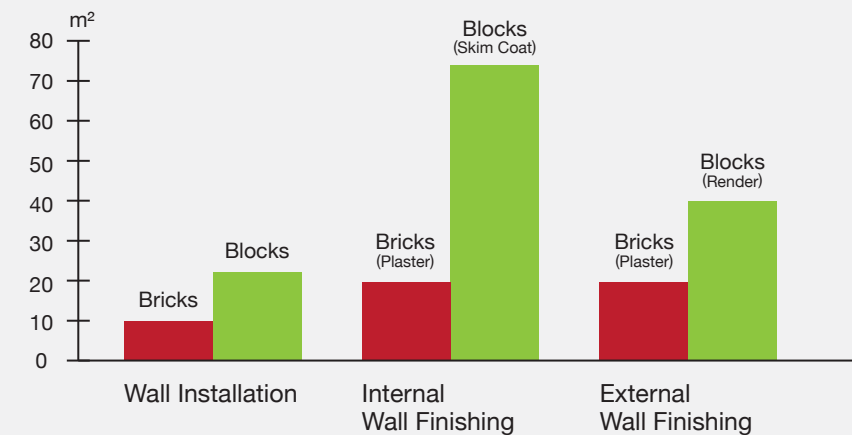
AAC products are becoming the preferred building products for constructing residential, hotel, industrial and public buildings because of its natural composition and non-toxic property, saves energy and environmental friendly. AAC products possess the durability characteristics similar to normal concrete or stone, yet with workability better than wood.

Cost-saving Benefits

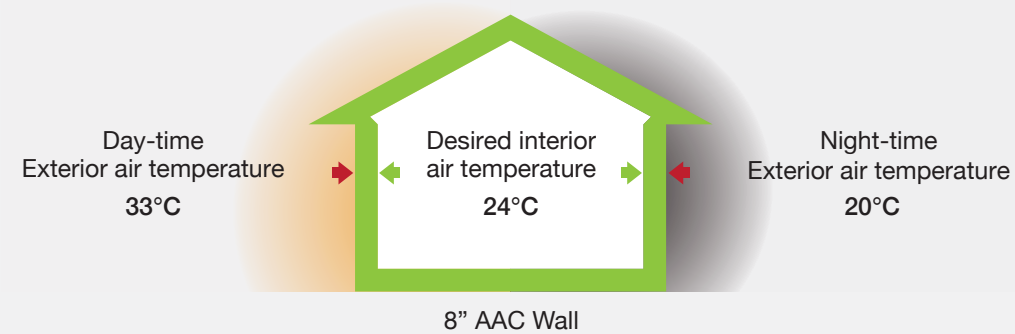
1 Save up to 25% of Foundation Cost Brick vs AAC Block



2 Wall Installation Speed AAC Block vs Brick (m²/ worker/ day)

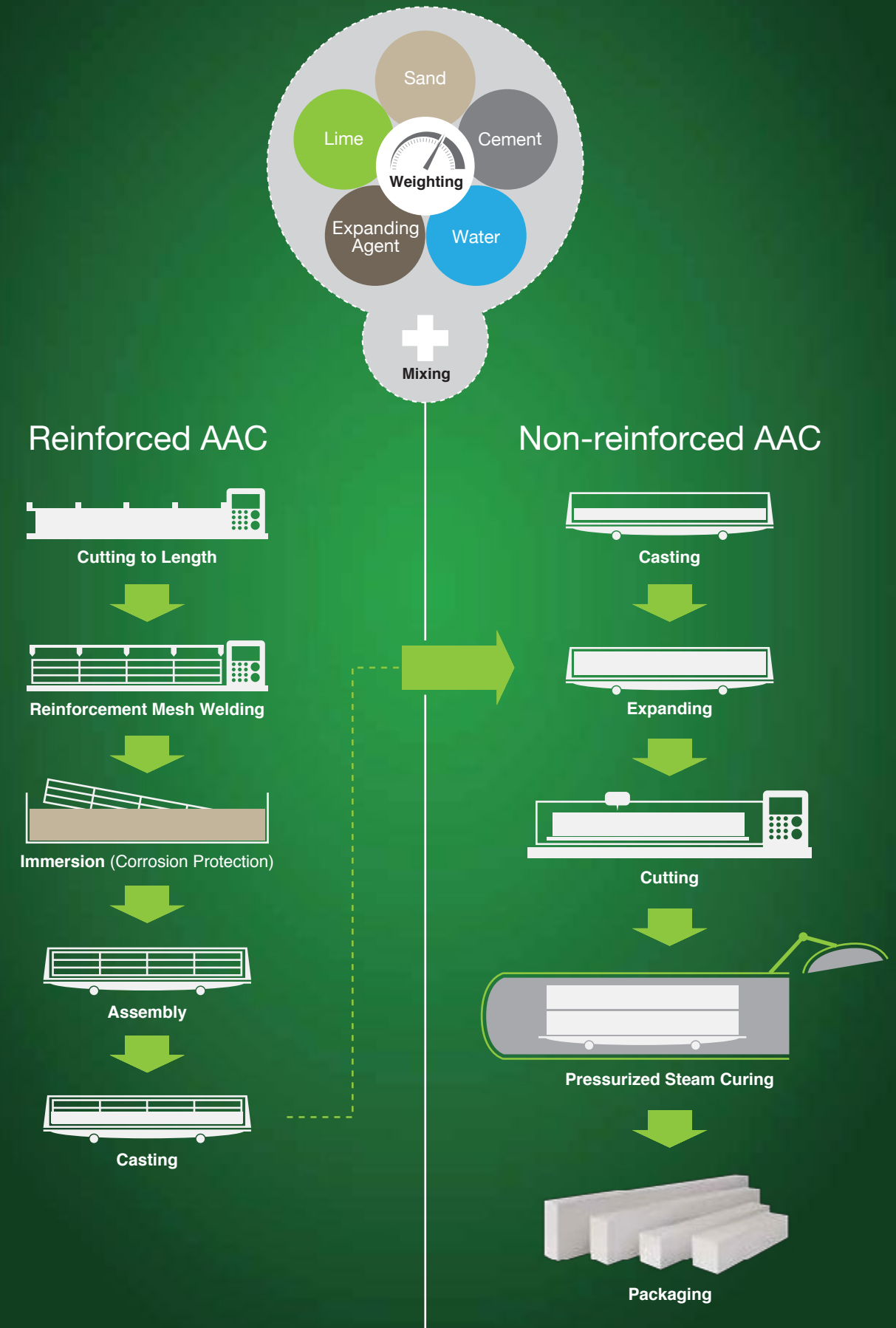


3 Thermal Control Heat insulation 6 times superior than clay brick



Note : Building uses approximately 30% less energy for cooling and heating the interior air space.

Production Process



AAC Building Systems

WHERE TO APPLY STARKEN PRODUCTS?

Autoclaved Aerated Concrete is ideal for load-bearing and non-load bearing applications. In addition, Starken AAC products are suitable for various types of buildings such as:

- Residential Units
- Commercial Units
- Hospitals
- Factories
- Schools / Universities
- Hotels
- Shopping Malls
- Public Transport Intersection Buildings



SUSTAINABILITY

Starken AAC is a sustainable material and contained up to 20% of recycled materials. It provides long life span and is also recyclable, making it an exceptionally green building material.

Design

Starken AAC products are manufactured in standard sizes for ease of installation and compliance to Industrialised Building System (IBS) requirement.

Manufacturing & Delivery

Starken AAC production incorporates recycled material and employs strict waste minimization scheme while the transport fleets use less fuel (energy) to deliver goods to job sites.

Construction

Starken AAC products have better dimensional tolerances, can be cut easily and accurately. Consequently, superior finishing on completed walls meeting CIDB's QLASSIC requirement can be achieved. Available in sizes larger than conventional bricks/ blocks, Starken AAC products can be erected up to 3 times faster than brick wall.

Use

Starken AAC products are not only lightweight technology but also provide high-performance features such as thermal comfort, energy saving, high-impact, water & fire resistance.


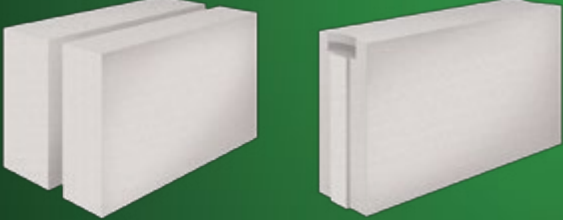
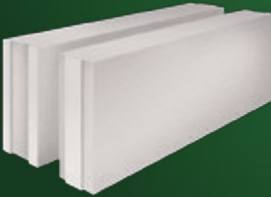
End of Life

Starken AAC blocks are fully applicable for recycling to create new construction materials. Building made of AAC can be altered easily according to specifications to avoid the hassle of demolishing & rebuilding.

STARKEN® BLOCKS

Starken offers a wide range of cost effective AAC block solutions for various types of wall applications. They are typically used in the construction of internal and external walls as well as in the construction of fire-rated walls such as party, compartment and separating walls.

Product Summary

Product	Length x Height (mm)	Thickness (mm)	General Usage
Standard Block • CoolPro3™ • DuraPro5™ • StrongPro7™ <small>NEW</small>	600 x 200	50, 75, 100, 125, 150, 175, 200, 225, 250, 300	All blocks are applicable for infill walls. Only block thickness 125mm & above are suitable for use as load-bearing walls.
			
Jumbo Block & Jumbo Block EZ • CoolPro3™ • DuraPro5™	600 x 400, 600 x 600, 600 x 1200	100, 125, 150, 200	All blocks are applicable for infill walls & load-bearing walls. * Jumbo Block EZ only available in thickness 150 & 200mm
			
Interlocking Block • CoolPro3™ • DuraPro5™	600 x 200	150, 200	All blocks are applicable for infill walls & load-bearing walls.
			

Standard Block

Applications:

- General internal & external walls
- Party, compartment & separating walls
- Acoustic & fire-rated walls

Working dimension: Length x Height (mm)

Blocks are available in 600 x 200



Starken Standard Blocks offer a fast, convenient and versatile solution for most walling requirements. Each block is equivalent to 7 pieces of common brick.

Starken AAC blocks are easy to work with and can be cut to size with a tungsten carbide-tipped handsaw. This allows maximum flexibility and minimizes wastage.

CoolPro3™

Compressive Strength: **3.5 MPa**
 Thermal Conductivity: **0.172 W/m.K**
 Nominal Dry Density: **500 ± 50 kg/m³**
 Working Density: **700 ± 50 kg/m³**

DuraPro5™

Compressive Strength: **5.5 MPa**
 Thermal Conductivity: **0.244 W/m.K**
 Nominal Dry Density: **600 ± 50 kg/m³**
 Working Density: **840 ± 50 kg/m³**

StrongPro7™

Compressive Strength: **7.0 MPa**
 Nominal Dry Density: **650 ± 50 kg/m³**
 Working Density: **910 ± 50 kg/m³**

Properties:

Modulus of Elasticity
1,500 - 2,500 MPa

Ultimate Tensile Strength
0.44 - 0.55 MPa

Modulus of Rupture
0.44 - 0.55 MPa

Packaging

Length x Height (mm)	Thickness (mm)	Quantity per pallet	Coverage per pallet	
			m²	m³
600 x 200	50	360	43.2	2.2
	75	240	28.8	2.2
	100	180	21.6	2.2
	125	144	17.3	2.2
	150	120	14.4	2.2
	175	96	11.5	2
	200	84	10.1	2
	225	72	8.6	1.9
	250	72	8.6	2.2
300	60	7.2	2.2	

Length x Height (mm)	Thickness (mm)	Weights (kg)		
		CoolPro3™	DuraPro5™	StrongPro7™
600 x 200	50	4	5	5.5
	75	6	7.5	8.2
	100	8	10	10.9
	125	10	12.5	13.7
	150	12	15	16.4
	175	14	17.5	19.1
	200	16	20	21.8
	225	17.8	22.5	24.6
	250	20	25	27.3
300	24	30	32.8	

Note :

1. The above information may subject to change.
2. Do not use the above information for calculating the transportation weight and volume.



STÄRKEN[®]

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Version 1.3