



Delivering World-class Lightweight Solutions

EFFICIENT
STRONG
PRECISION

Starken Reinforced AAC Panels

- External & Internal Infill Walls
- Floor, Decking & Roofing
- Decorative & Aesthetic Use

Delivering Quality Sustainable Building Solutions

Starken AAC Sdn Bhd is the leading AAC (Autoclaved Aerated Concrete) manufacturer in Malaysia that aims to deliver quality products to its customers. With its commitment to quality products & services, Starken invested in the state-of-the-art machineries and technology supplied by Wehrhahn of Germany.

Situated at Serendah, Selangor. Starken's production facility manufactures blocks efficiently and engineered panels cost-effectively with an annual capacity of 975,000 cubic meters. It covers a wide range of AAC products with various compressive strengths to cater for specific architectural and design requirements of various types of buildings. Starken's main products include AAC blocks, panels and lintels with dry density of 450 kg/m³ – 820 kg/m³.

With its storage capacity of more than 10,000 m², the supply of AAC products will always be sufficient to meet the demand of on-going projects.

Commitment to Excellence

Starken prides itself on maintaining the highest level of customer service and support. Every member of Starken is committed to both excellence in customer service and the production of quality building materials.

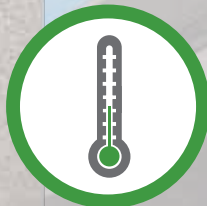
At Starken, we listen very carefully to our customers' needs and concerns. We ensure that our customers receive better value and excellent product performance through our expertise, knowledge and experience in assisting them in all areas of their construction related needs on AAC products.



ADVANTAGES OF AUTOCLAVED AERATED CONCRETE WALL PANEL



Cost-effective



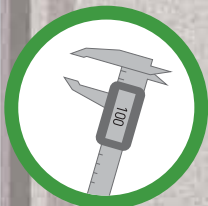
Thermal Comfort &
Energy Saving



Lightweight



Eco-friendly



Dimensional
Accuracy



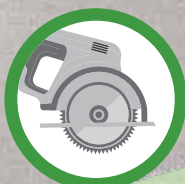
Durable



Sound
Resistant



Impact Resistant



Good Workability



Water Resistant



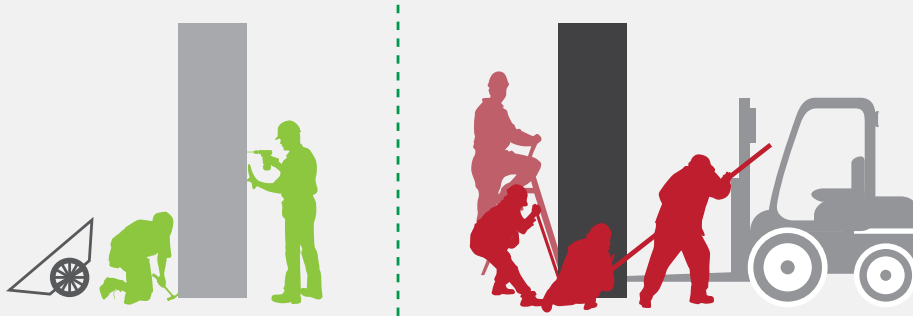
Fire Resistant

Key Benefits of Wall Panel

1

Manpower Efficiency

AAC Panel vs Concrete Panel



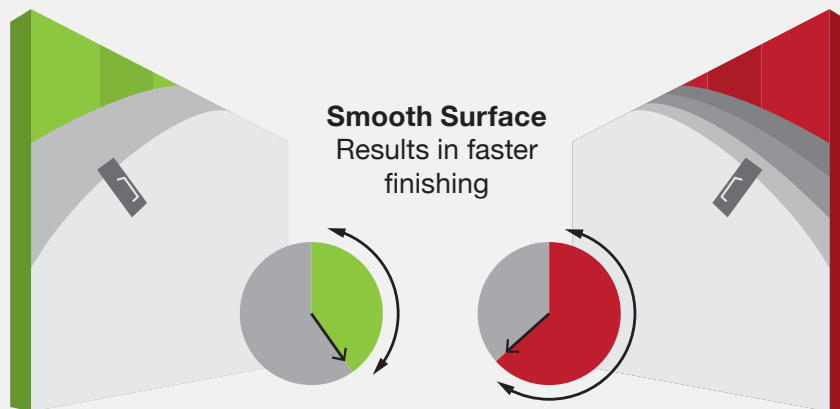
AAC Panel
(Weight 150kg±)

Concrete Panel
(Weight 250kg±)

2

Wall Installation & Finishing Speed

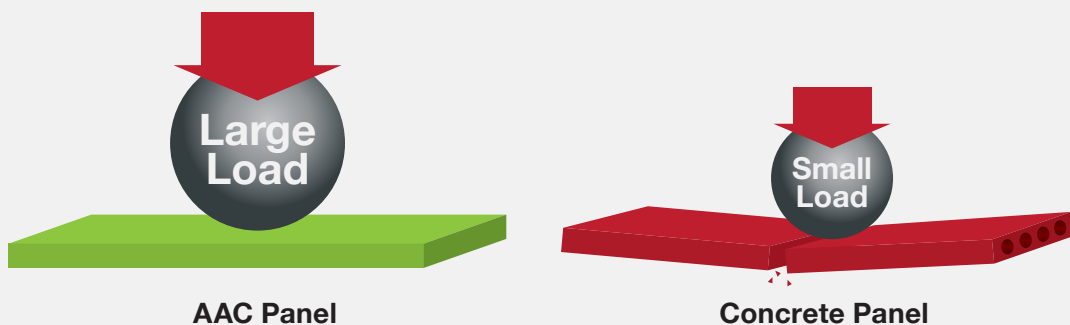
AAC Panel vs Concrete Panel



3

Reinforcement Strength

AAC Panel vs Concrete Panel



AAC Panel

Concrete Panel

Starken Infill Wall Panels

Starken AAC Panels are reinforced lightweight panels that can be used as external & internal walls, party wall, separating & compartment walls and other non-loadbearing wall applications as a replacement for common brickwall. Refer to Page 7, 8 and 9 for comprehensive guide on where to apply Starken Panels.

When used as non-loadbearing wall, Starken panels offer much lighter solution than many other concrete-based IBS wall panel systems such as hollow core concrete wall system. This attribute would result in a rapid installation and faster completion time. Lighter panel weight will result in savings in the foundation and structure costs. A typical 100mm (thick) x 600mm (wide) x 3000mm (long) Starken Panel weighs approximately 150kg while a similar size of normal concrete hollow core panel weighs close to 250kg. This translates to about 38% reduction in the overall wall weight.

Average Compressive Strength: **3.5 MPa***

Working Density: **780 - 820 kg/m³**

Modulus of Elasticity: **1,750 MPa****

Thermal Conductivity: **0.16 W/mK***

Fire Resistance: **2 hours (75mm thick) & 4 hours (100mm thick & above)*****

Note: * Tested values based on conditioning to BS EN 771-4

** Estimated based on EN 12602

*** Tested to BS 476 Part 22 (non-loadbearing wall)

Starken wall panels incorporate single or double steel mesh reinforcement and designed to withstand loads that are customary to non-load bearing walls such brickwall and blockwall systems. These panels are designed to cater between 0.5kPa to 1.0kPa service lateral pressure. For ease of installation, Starken wall panel lengths can be customised from 900mm to 6000mm to suite specific project needs.

Working dimension:

A Length: **900 - 6,000mm (±5mm)**

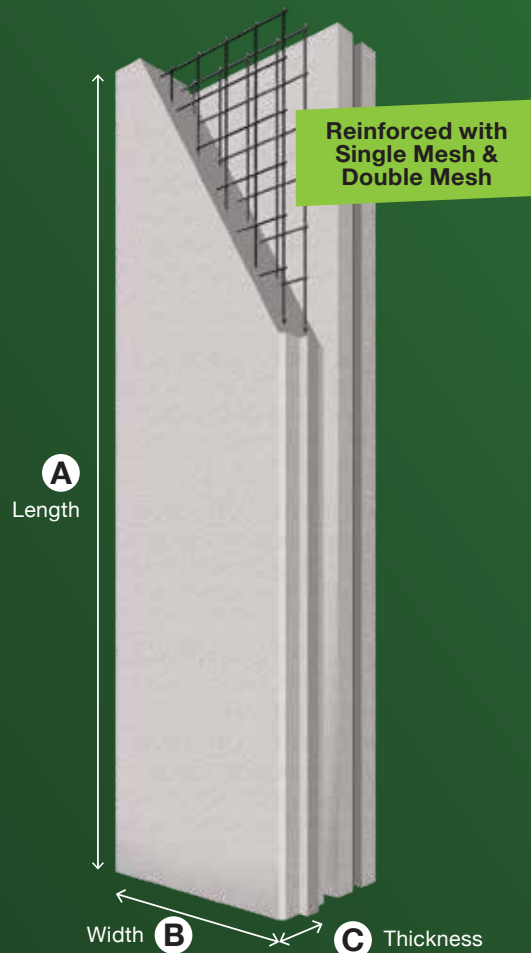
B Width: **600mm (±2mm)**

C Thickness: **75, 100, 125, 150 & 200mm (±2mm)**

Thickness (mm)	Max. Length (mm)	Estimated Weight/ m	Estimated Weight/ m ²
75	3,000	37	62
100	4,000	49	82
125	4,600	62	103
150	6,000	74	123
200	6,000	98	164
250	6,000	123	205

Notes: Panel weight was estimated based on nominal density of 820 kg/m³.

Prior consultation with Starken Technical Department during design is recommended to ensure all intended design requirements are fully met and the right panel solution can be delivered.



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



Where Starken AAC is used?



Landed Houses



Apartments /
Condominiums






Industrial / Commercial
Building



Decorative
Aesthetic & others

Starken Panel (Single Mesh)



				
75mm	<ul style="list-style-type: none"> • Perimeter Fencing • Garbage Shed 	-	-	-
100mm	<ul style="list-style-type: none"> • Internal Partition • Party Wall • Unit/ Border Fence 	<ul style="list-style-type: none"> • Internal Partition • Perimeter Fencing 	<ul style="list-style-type: none"> • Perimeter Fencing 	<ul style="list-style-type: none"> • Fin Wall (Terrace House)
<p><i>Remarks:</i> 1. Up to 0.5kPa service load. 2. For party wall, apply 10mm thick Starken Render both sides to achieve minimim STC 45dB.</p>				
125mm	<ul style="list-style-type: none"> • Internal Partition • External Wall • Party Wall 	<ul style="list-style-type: none"> • Internal Partition • Corridor Wall • Party Wall 	-	<ul style="list-style-type: none"> • Fin Wall (Terraced House & Low-rise Building)
<p><i>Remarks:</i> 1. Up to 0.65kPa service load.</p>				

Starken Panel (Double Mesh)



Thickness	Residential	Commercial	Industrial	Landscaping
75mm	<ul style="list-style-type: none"> • Internal Partition • Roof Sarking 	<ul style="list-style-type: none"> • Internal Partition • Roof Sarking 	-	<ul style="list-style-type: none"> • Fin Wall • Coping
<i>Remarks: Internal partition application is recommended for affordable house.</i>				
100mm	<ul style="list-style-type: none"> • Internal Partition • External Wall • Party Wall • Parapet Wall 	<ul style="list-style-type: none"> • Internal Partition • External Wall • Party Wall • Parapet Wall • Staircase Wall 	<ul style="list-style-type: none"> • Internal Partition • External Wall • Compartment Wall • Separating Wall • Acoustic Wall • Parapet Wall • Staircase Wall 	<ul style="list-style-type: none"> • Fin Wall • Coping / Hood • Planter Box • Sound Barrier
125mm	<ul style="list-style-type: none"> • Internal Partition • External Wall • Party Wall • Parapet Wall 	<ul style="list-style-type: none"> • Internal Partition • External Wall • Party Wall • Parapet Wall • Staircase Wall • Corridor Wall 		<ul style="list-style-type: none"> • Fin Wall • Coping / Hood • Planter Box • Sound Barrier
150mm	<ul style="list-style-type: none"> • Load-bearing Wall 	-	-	-
200mm	<ul style="list-style-type: none"> • Load-bearing Wall 	-	<ul style="list-style-type: none"> • 24-hour A/C Rooms • Party Wall 	-

Remarks:

For party wall, apply 10mm thick Starken Render both sides to achieve minimum STC 45dB.

Starken Floor Panel



Thickness	Residential	Commercial	Industrial	Landscaping
75mm 175mm 200mm 225mm 250mm	<ul style="list-style-type: none"> • Upper Level Floor 	<ul style="list-style-type: none"> • Mezzanine Floor 	<ul style="list-style-type: none"> • Mezzanine Floor & Light-duty Office Floor 	-

Remarks: Not recommended for ground floor slab when panels will be in contact with still water

Finishes

Starken infill wall panels can be finished with skim-coating or rendering systems.

Coating for Internal Partition:

Dry Area: **5mm Thickness *Skimcoat**

****Wet Area: 10mm Thickness *Render with
***Tile Finish**

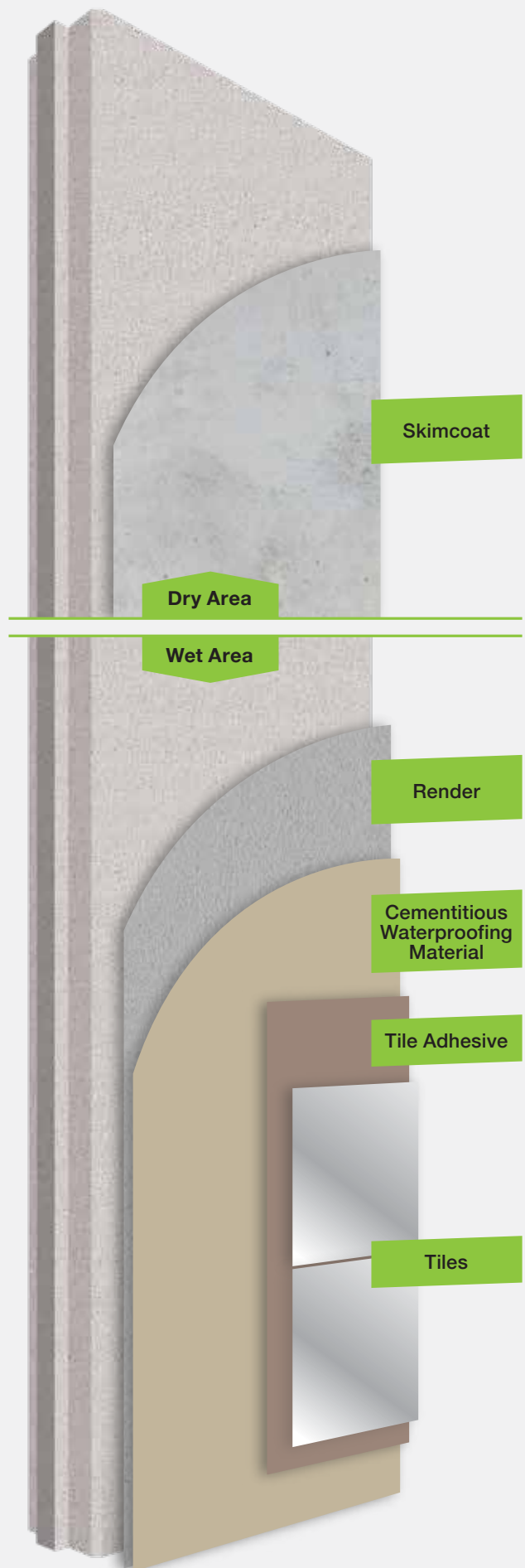
*Note: *Starken Skimcoat and Render coating systems
**Apply cementitious type waterproofing material
***Use tile adhesive*

To achieve the best possible quality finish, the wall surface should be cleaned of oil, dusts before applying the coating system.

Emulsion or acrylic paint system is applied on the skim-coated or rendered wall surface to provide the final pleasing aesthetic looks.

Conduits

M&E conduits can be concealed in Starken infill wall panel system. Chasing is carried out up to 30mm deep and 40mm wide. Refer to the installation detail for chasing allowance.



Fixtures

Nylon plugs should be used on Starken infill wall panels to fix low to medium duty wall fixtures. There are easily available from Fischer, Hilti or Ramset.

For heavy duty applications, a suitable epoxy grout system should be used to hang heavy fixtures.

Starken recommends consultation with the fixing suppliers to select the best fixing solutions for projects.



ST8 ties should be selected based on the intended application & panel thickness. Refer table below as a general guide.

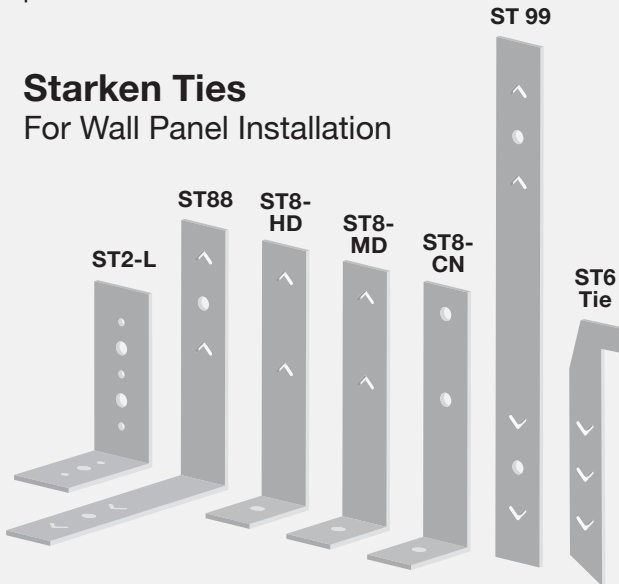
Starken Ties	Usage	Wall panel thickness
ST8-CN	Light duty usage such as internal wall for offices and residential units	<ul style="list-style-type: none"> • 75mm, 100mm & 125mm • Up to 3.6m wall height
ST8-MD	Medium duty wall requiring slightly higher lateral load resistance such as external wall	<ul style="list-style-type: none"> • 100mm & 125mm • Up to 4.0m wall height
ST8-HD	Non-residential wall subjected to heavy impact loads & lateral wind load	100mm and above

Installation

Starken infill wall panel system comes with a simple installation method. The panels can be installed in vertical or horizontal orientation. The vertical installation is the preferred method as the panel supports at the base and top are readily provided by the structure. For horizontal erection, additional vertical supports in the form of stiffeners or secondary columns need to be installed prior to panel erection.

Starken Ties

For Wall Panel Installation



Each panel is easily transported and manoeuvred into position using dollies, a panel trolley or other suitable equipment. Once in position, the panel is tilted upright and secured to the supporting structure using a special ST8 tie brackets at the base and the top of the panel. 2 V-nails or concrete nails are then driven into the panel at each tie bracket.

Starken Thin Bed Adhesive (TBA) is used to join the panel at the joints using a steel trowel and a notched trowel. Concrete fasteners are then used to secure the ST8 tie to the concrete members. For steel members, it is simply welded for secure fixing.



Expansion Joint (E.J) should be incorporated for panel wall that exceeds 8m in length. Typical detail for the E.J is a 10mm wide gap infilled with a suitable backing rod and flexible sealant material. Additional insulation materials such as glasswools or rockwools can be incorporated if deemed necessary.



Delivering World-class Lightweight Solutions

Starken AAC Sdn Bhd (752003-D)

Head Office:

No.A-1-3A, Pusat Perdagangan Kuchai,
No.2, Jalan 1/127, Off Jalan Kuchai Lama,
58200, Kuala Lumpur, Malaysia.

T : +603-7983 8068

F : +603-7980 0137

E : info@starken.com.my

Factory:

Plot 6, Jalan Bunga Azalea 1/2,
Kawasan Industri Jalan Bunga Azalea,
48200, Serendah, Selangor Darul Ehsan,
Malaysia.

www.starken.com.my



Version 1.2

