Building with Fortis Panels

Better, Faster, Stronger

MIDDLE EAST BEST BRAND AWARDS 2018

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Fortis Panels specializes in cutting edge technology, providing turnkey solutions for the construction industry.

With our innovative moulding system and local manufacturing we are able to deliver high quality products that bring advanced technology to the construction industry, reducing the carbon footprint of construction at every phase.
Fortis Panels

Fortis Panels for interior and exterior walls and partitions.

The Fortis Panel is composed of a 6mm fibre cement board facing with a core of concrete and EPS (Expanded Polystyrene).

Each panel is 1.8 m² (3m x 0.6m) with thickness options of 75mm, 100mm, 150mm & 200mm.

Tongue and groove profiles to interlock each panel.

History

The idea of the light weight panel originated from Australia in the 1970’s and since then it has spread across Asia, being used in all areas of construction.

With over two years of R&D and four years of production, Fortis Panels is proud to be the first and only GCC manufacturer to be approved by Dubai Municipality & UAE Civil Defence.
Advantages

**Time Saving**
- Up to 7x faster installation than competition

**Cost Saving**
- Fewer labour hours
- Transport efficiency
- No fixed scaffolding
- Less water required
- No door sub frames needed
- No lintel beams required

**Quality**
- Local manufacturing
- High quality components from reputable brands
- No ripples
- Flat and straight

**Safety**
- 3 Hours fire rating
  (Civil Defence Approved)
- Non-toxic

**Sustainability**
- U-Value Up to 0.251
- Minimal wastage

**Handling**
- No wet work/plastering required
- Ready to paint
- Lightweight
- Simple installation
Installation

1. Fix Channel/Angle to floor and ceiling

2. Shift the panels to desired location by using trolley

3. Apply Fortis jointing compound on the groove and slide the next panel into position

4. Place the panel in the channel and slide into position

5. The Panels are ready to be painted after taping and jointing
Detailed View

DESCRIPTION

1. Galvanized U Channel (shall be covered by flooring system).
2. Direct fastening nails 20mm long, spaced at every 500 mm.
3. 6mm thick fibre cement board.
4. EPS with regular portland cement.
5. Fortis Panels jointing compound.
7. Ø-12mm Dowel rebar chemically bonded by chemical anchor fixing grout with 50 mm minimum penetration from each side @ every 1.00 MTR.
8. Hilti CP 606 fire sealant.
9. R.C.C column / wall.
10. Fortis light weight panel.
11. Rockwool / glass fibre insulation board.
12. Wall finish as per schedule.
13. Floor finish as per finishing schedule.
14. R.C.C slab.
<table>
<thead>
<tr>
<th></th>
<th>Fortis Panels</th>
<th>Hollow Block Plaster Finish</th>
<th>AAC Block</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressive Strength - Wall Section (N/mm²)</td>
<td>4.0 – 5.0</td>
<td>1.3 - 3.5</td>
<td>3.0 - 4.0</td>
</tr>
<tr>
<td>Direct Pullout (N)</td>
<td>Up to 2200</td>
<td>Up to 710</td>
<td>Up to 320</td>
</tr>
<tr>
<td>Density (Kg/m3)</td>
<td>600 ± 7%</td>
<td>1400 - 1900</td>
<td>400 – 1000</td>
</tr>
<tr>
<td>U Value (W/m².K)</td>
<td>Up to 0.251</td>
<td>2.3 - 2.8</td>
<td>0.3 - 0.4</td>
</tr>
<tr>
<td>Fire Rating (Insulation &amp; Integrity)</td>
<td>3 Hours</td>
<td>Varies</td>
<td>0-4 Hours</td>
</tr>
<tr>
<td>Acoustic STC Rating (dB)</td>
<td>Up to 55</td>
<td>Up to 46</td>
<td>Up to 39</td>
</tr>
<tr>
<td>Joint Capacity (kN/m)</td>
<td>Up to 17.38</td>
<td>2 – 2.5</td>
<td>2 – 2.5</td>
</tr>
<tr>
<td>Flexural Strength-Face (kN/m)</td>
<td>Up to 6.84</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Flexural Strength-Side (kN/m)</td>
<td>Up to 8.10</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Axial Load Capacity (kN)</td>
<td>Up to 140.3</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Plaster Requirement</td>
<td>Not Required</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Wet Areas</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

FORTIS PANEL accelerates speed of construction, cost savings in both material and manpower requirements, functionality and adaptability in design, along with outstanding engineering characteristics.
# Time Comparison

A comparison of time taken to build a finished wall (2 sides of plaster) ready to paint on both sides.

- Wall area = 16sqm (as per BS 5628-1:2005)
- Length = 4.5m
- Height = 3.5m
- 2-point lateral support; 1 existing and 1 to be installed by contractor

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Step</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location marking</td>
<td>0.5 hr</td>
<td>Location marking</td>
<td>0.5 hr</td>
</tr>
<tr>
<td>Bottom and top track cutting and setting</td>
<td>1.0 hr</td>
<td>Mortar mixing and setting out</td>
<td>1.0 hr</td>
</tr>
<tr>
<td>Install first panel with dowel bars</td>
<td>1.0 hr</td>
<td>Block laying</td>
<td>24 hrs</td>
</tr>
<tr>
<td>Installation of vertical panels</td>
<td>2.0 hrs</td>
<td>Curing time</td>
<td>24 hrs</td>
</tr>
<tr>
<td>Measuring and cutting of horizontal panels</td>
<td>1.0 hr</td>
<td>Manual plastering</td>
<td>5.0 hrs</td>
</tr>
<tr>
<td>Installation of horizontal panels</td>
<td>1.5 hrs</td>
<td>Curing time</td>
<td>48 hrs</td>
</tr>
<tr>
<td>Closing of head track</td>
<td>1.0 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing of joints</td>
<td>2.0 hrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finishing of joints</td>
<td>3.5 hrs</td>
<td></td>
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</tbody>
</table>

Note: Panels only require mobile scaffolding and not restricted by height

<table>
<thead>
<tr>
<th>Fortis Panels 3000 x 600 x 150 (h x l x w) Team of 6 skilled labourers</th>
<th>Total Time</th>
</tr>
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<tbody>
<tr>
<td>Blocks 200 x 400 x 150 (h x l x w) Team of 5 bricklayers and 2 plasterers</td>
<td>102.5 hrs</td>
</tr>
</tbody>
</table>

Note: Block work walls cannot be built higher the 6 courses without the mortar setting i.e. 24 hours

Rigid scaffolding is required to be fixed for blockwork at 1.5m height.

Fortis assumes the scaffolding and the first 6 courses can be done in 24 hours.
Clients

Reem Mall – Abu Dhabi

Client: Alfarwaniya
Contractor: Itinera / Ghantoot (IGJV)
Location: Abu Dhabi
Square Meters: 37,000
Expected Completion: 2021

Bloom Heights

Client: Bloom Emirates Properties
Contractor: Al Oroba Contracting
Location: JVC - Dubai
Square Meters: 75,700
Project Completed: 2020

Park Ridge-I

Client: Emaar
Contractor: ECC (Engineering Contracting Company)
Location: Dubai Hills Estate - Al Barsha
Square Meters: 45,000
Expected Completion: 2020

Bloom Towers

Client: Bloom Emirates Properties
Contractor: Al Oroba Contracting
Location: JVC - Dubai
Square Meters: 101,500
Project Completed: 2020
**Clients**

**Meraki Arjan - Sobha**

Client: Sobha  
Contractor: Sobha  
Location: Al Barsha - Dubai  
Square Meters: 15,000  
Project Completed: 2019

**Azizi Aura Residences**

Client: Azizi Development  
Contractor: Al Qandeel Contracting  
Location: Jabel Ali - Dubai  
Square Meters: - -  
Project Completed: 2020

**Vista Residences**

Client: Azizi Group  
Contractor: Al Shafar Contracting  
Location: Al Nahda, Dubai  
Square Meters: 45,000  
Expected Completion: 2020
Project Photos - Cutting & Chasing for Services
Project Photos
Project Photos
Up to 7x faster installation per m² compared to competition
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Superbrands

Fortis Panels

Has been awarded Superbrand Status following a strict selection process by the UAE Superbrands Council

Alex Bibi
Brand Liaison Director