ICC-ACOTEC
Precast Wall Panels
Saves Material, Labour & Time
We continue our efforts in introducing value added solutions to the construction industry towards an emerging Sri Lanka
ICC-ACOTEC Precast Wall Panels

Since their introduction in the late 1980’s, ACOTEC walls have proven themselves in more than 15 countries including Germany, United Kingdom, Finland, Ireland, Spain, Japan, Singapore, Malaysia, China & India under various brands.

ICC-ACOTEC precast wall panels are made out of concrete comprising cement, sand & aggregate

Its main application is the partitioning of residential, commercial, institute & office buildings replacing traditional materials used in partitions and facades such as brick & cellular blocks.

5 x Faster than Traditional Brick-Wall
5 x Faster than Cement Cellular-Block-Wall
3 x Fast as CLC or AAC Block-Wall
Traditional on-site construction methods meet with efficiency problems especially in societies where labour costs are high and the demand for fast construction projects continuously grow.

BRICK TO BLOCK - BLOCK TO PANEL
Leaps in Efficiency

Physical Properties of ICC-ACOTEC Panels

<table>
<thead>
<tr>
<th></th>
<th>ICC-ACOTEC 75 mm</th>
<th>ICC-ACOTEC 100 mm</th>
<th>ICC-ACOTEC 140 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>110 kg/m²</td>
<td>124 kg/m²</td>
<td>164 kg/m²</td>
</tr>
<tr>
<td>Panel Bulk Density</td>
<td>1434 kg/m³</td>
<td>1274 kg/m³</td>
<td>1211 kg/m³</td>
</tr>
<tr>
<td>Fire Resistance</td>
<td>120 mins</td>
<td>&gt;130 mins</td>
<td>&gt;130 mins</td>
</tr>
<tr>
<td>Sound Insulation</td>
<td>41 dB</td>
<td>43 dB</td>
<td>&gt; 43 dB</td>
</tr>
<tr>
<td>Thermal Resistance</td>
<td>0.4 m²K/W</td>
<td>&gt;0.4 m²K/W</td>
<td>&gt; 0.4 m²K/W</td>
</tr>
<tr>
<td>Panel Strength</td>
<td>&gt;5 N/mm²</td>
<td>&gt;5 N/mm²</td>
<td>&gt;5 N/mm²</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>1.08 N/mm² (100 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loading Test</td>
<td>299.7 KN (100 mm thick panel with 2700 mm height)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* According to International test references

ICC-ACOTEC Precast wall panels with thicknesses of 75mm, 100mm & 140mm available in heights of 2700mm, 3000mm & 3300mm

*Refer page 6
**Comparison of Physical Properties**

**ICC-ACOTEC vs Conventional Wall Materials**

<table>
<thead>
<tr>
<th>Property</th>
<th>Conventional Brick Wall</th>
<th>Cellular Block Wall</th>
<th>AAC / CLC Block Wall</th>
<th>ICC-ACOTEC Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Rating (hrs)</td>
<td>1 - 2</td>
<td>1 - 2</td>
<td>2</td>
<td>1.5 - 2.5</td>
</tr>
<tr>
<td>Sound Insulation</td>
<td>35 dB</td>
<td>38 dB</td>
<td>42 dB</td>
<td>43 dB</td>
</tr>
<tr>
<td>Compressive Strength (N/mm²)</td>
<td>2.5</td>
<td>3</td>
<td>5</td>
<td>5 - 6</td>
</tr>
<tr>
<td>Thermal Conductivity (W/mK)</td>
<td>0.13</td>
<td>0.88</td>
<td>0.18</td>
<td>0.56</td>
</tr>
<tr>
<td>Thermal Resistance (m²k/W)</td>
<td>0.8</td>
<td>-</td>
<td>0.75</td>
<td>0.18</td>
</tr>
<tr>
<td>Moisture Absorption (%)</td>
<td>30</td>
<td>10</td>
<td>15</td>
<td>8</td>
</tr>
</tbody>
</table>

* According to International test references
PROFITABILITY AT IT’S PINNACLE
With ICC-ACOTEC Solutions

1. Higher productivity
   - 80% Saving on Labour
     - 5 m² per labour day
     - (compared to 1 m² per labour day with conventional blocks)

2. Reduced use of machinery
   - 40% Less Weight
     - Eliminates lifting of plaster materials (sand & cement)

3. No stiffener and lintel required
   - 20% Savings
     - Save on reinforcement, concrete, formwork, labour & time

4. Faster installation & finishing
   - 5x Faster
     - 5x faster than block work and
     - 4x faster than AAC / CLC blocks

5. Eliminates plaster on both sides
   - Zero Cost of Plastering
     - No 15mm thick plastering required
     - Only a 3 - 5mm skim coat

6. Full height constructability
   - Build at Once
     - Continuous construction up to 3.3m height
     - (compared to 1.2m height restriction with conventional blocks)

7. Panels with larger dimensions (600mm x 3000mm)
   - Larger Coverage Capacity
     - 1 panel is equivalent to 25 Cellular blocks
     - 1 panel is equivalent to 16 AAC blocks

8. Precise
   - Factory Finished Product
     - Saves on correcting imperfections due to high standards & consistency

9. Ease of laying service lines
   - Eliminates Vertical Cutting
     - Vertical hollow-cores can be used for plumbing & electrical

10. Peace of mind
    - Cleaner Job Site
        - Less wastage & minimal wet work

SAVES
- Material
- Labour
- Time
- Improved Margins
- Reduced Overheads
- Faster Completion
REVOLUTIONIZE TO A BETTER BUILDABILITY* 
By Deploying ICC-ACOTEC Wall Panels

Being a factory finished product it has high accuracy which means less material & labour cost involved for final finishes which carries better quality standards.

<table>
<thead>
<tr>
<th>Install Speed ( m²/man day )</th>
<th>Conventional Brick Wall (with plaster)</th>
<th>Cellular Block Wall (with plaster)</th>
<th>AAC / CLC Block Wall (with plaster)</th>
<th>ICC-ACOTEC wall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workmanship for 100 m² ( man hrs )</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Units per 100 m² wall area</td>
<td>105</td>
<td>95</td>
<td>55</td>
<td>20</td>
</tr>
<tr>
<td>Mortar used (m³)</td>
<td>5500</td>
<td>1100</td>
<td>600</td>
<td>55</td>
</tr>
<tr>
<td>Plastering on each side (mm)</td>
<td>7.5</td>
<td>7.2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Weight per m² (kg)</td>
<td>15</td>
<td>15</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

* Calculation for 100 mm wall

*BUILDABILITY is the extent to which the design and the adoption of construction techniques & processes affects the productivity level of building works
ACOTEC PRECAST WALL PANELS
Used Commercially Worldwide

Europe, Middle-East & Asia

Europe & Middle-East
- Germany
- United Kingdom
- Spain
- Ireland
- Portugal
- Saudi Arabia

Asia
- Sri Lanka
- Japan
- Singapore
- South Korea
- China
- India
- Indonesia
- Philippines
- Taiwan
- Thailand

Website - www.elematic.com