Cavities over 150mm which necessitate long wall ties can be difficult to balance and keep horizontal when built into the inner leaf. Two-Part Ties can be used to eliminate these issues. The Ancon Two-Part Tie has one section built into the inner leaf and the second section is installed as the outer leaf is built.

**Wall Tie Lengths & Embedment Depth**

The Ancon Two-Part Tie requires an embedment depth of 75mm in each leaf. The inner section is usually manufactured in a length of 170mm with variation in the cavity width being accommodated by the length of the outer section.

Where insulation thickness is in excess of 60mm, the inner section should be longer than the standard 170mm to ensure the connection between the two parts is made in the open cavity.

**Recommended Length of Inner Section**

<table>
<thead>
<tr>
<th>Insulation Thickness (mm)</th>
<th>Inner Section Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-50</td>
<td>170</td>
</tr>
<tr>
<td>60 +</td>
<td>Insulation thickness +110</td>
</tr>
</tbody>
</table>

**Installation Procedure**

Users should check wall tie length and density with the information above and overleaf prior to installation.

Wall ties should be pressed down in, and then surrounded by, fresh mortar. They should not simply be positioned directly onto the masonry with mortar placed around them or pushed into a constructed joint.

The inner section is built into the first masonry leaf ensuring a 75mm embedment depth. Insulation should be held back using Ancon insulation retaining clips referenced ‘TJ Clip’.

As work on the second masonry leaf progresses, the outer tie section is fixed into the inner section as shown below.
Performance, Density & Positioning of Ties

When using the standard 170mm long inner section, Ancon Two-Part Ties sustain loads which exceed the requirements for a Type 2 tie (PD 6697: 2010) for cavities up to 300mm. Type 3 performance is achieved at the standard tie spacing for wider cavities up to 400mm.

The standard density of ties for walls in which both leaves are 90mm or thicker should be not less than 2.5 per square metre (900mm horizontal x 450mm vertical centres). Ties should be evenly distributed around openings and preferably staggered.

At vertical edges of an opening, unreturned or unbonded edges additional ties should be used at a rate of one per 300mm height, located not more than 225mm from the edge.

A typical layout based on the standard 900mm x 450mm spacing is shown below.

Recommended Fixing Centres for Two-Part Ties

<table>
<thead>
<tr>
<th>Cavity (mm)</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>150-300</td>
<td>600x450</td>
<td>900x450</td>
<td>900x450</td>
</tr>
<tr>
<td>301-400</td>
<td>375x450</td>
<td>750x450</td>
<td>900x450</td>
</tr>
</tbody>
</table>

Centres shown achieve equivalent tie type performances to PD 6697 when using the standard inner section.

Typical Layout of Wall Ties

The Construction applications and details provided in this guide are indicative only. In every case installation should be entrusted to appropriately qualified and experienced persons. Normal handling precautions should be taken to avoid physical injury. The company cannot be held responsible for any injury as a result of using our products, unless such injury arises as a result of our negligence.

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