

# INSTALLATION GUIDE

## CAVITY WALL TIES

### IMPORTANT HEALTH AND SAFETY INFORMATION: PLEASE READ

There is a risk of injury if wall ties are left protruding from a single wall leaf before the second leaf is constructed. Site managers should make all workers and visitors aware of this risk.

To reduce the risk of injury, Ancon's stainless steel wall ties feature rounded safety ends and Ancon TeploTie wall ties are supplied with bright plastic end caps. These end caps should be applied loosely to the outer end of a TeploTie as work on the first leaf progresses; the caps must then be removed before the tie is built into the second leaf.

Ancon recommends both leaves of a cavity wall are built simultaneously to eliminate this risk.

### Density & Positioning of Ties

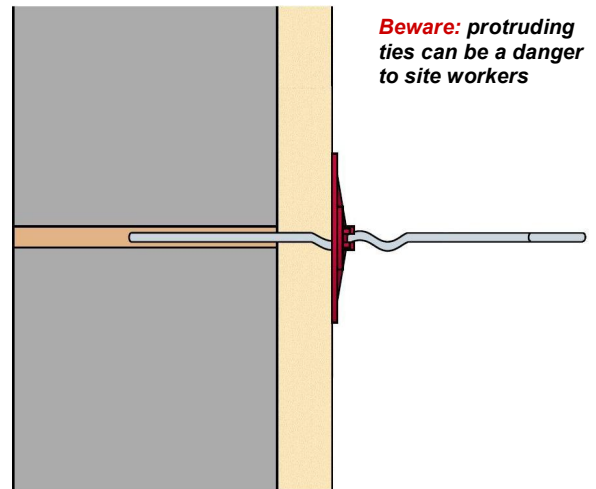
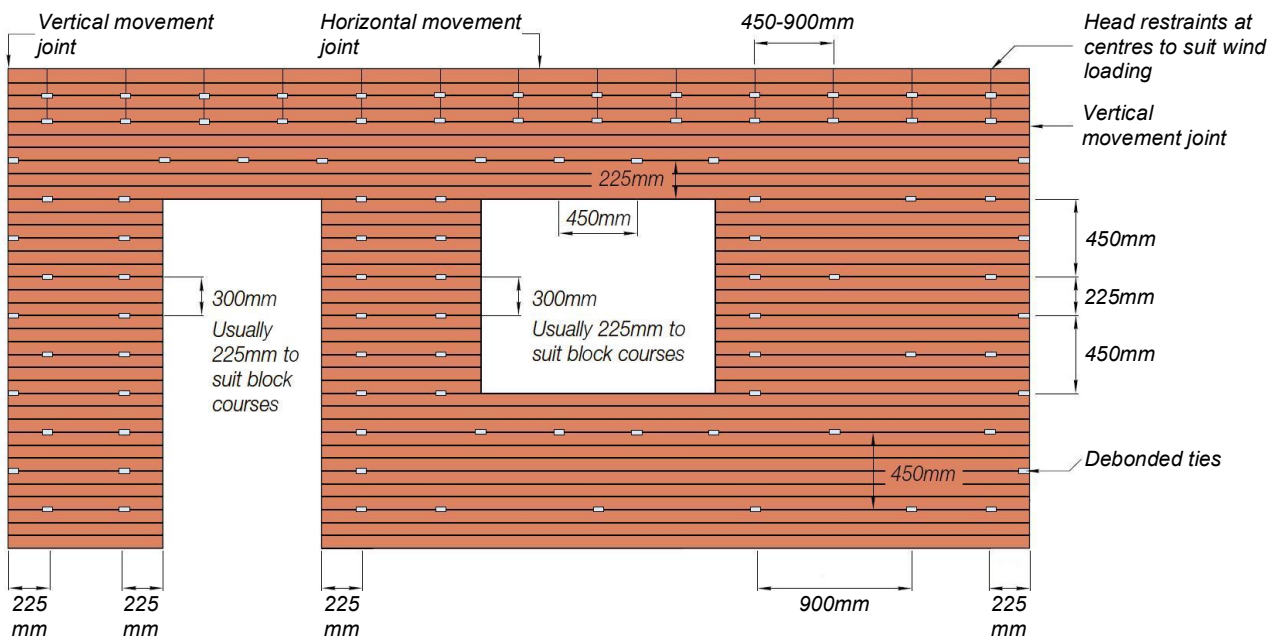
For walls in which both leaves are 90mm or thicker, ties should be used at not less than 2.5 per square metre (900mm horizontal x 450mm vertical centres). This guidance is applicable to the tie lengths shown in the table overleaf which covers cavities up to 300mm. Maximum wall tie spacing may need to be reduced in wider cavities, generally to 600mm horizontal x 450mm vertical centres (3.7 ties per square metre). Contact Ancon for further information.

Ties should be evenly distributed over the wall area, except around openings, and should preferably be staggered.

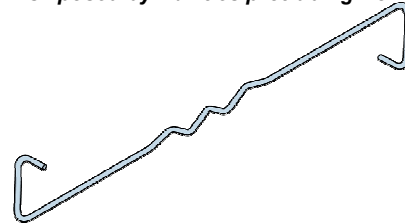
At vertical edges of an opening, unreturned or unbonded edges, and vertical expansion joints, additional ties should be used at a rate of one per 300mm height, located not more than 225mm from the edge. A typical layout is shown below.

### Typical Layout of Wall Ties Indicating Maximum Spacing

(Spacing may need to be reduced for cavities over 300mm)



All site workers and visitors should be made aware of the risk posed by wall ties protruding from a single wall leaf



Stainless steel wall ties feature safety ends which reduce the risk of injury



TeploTies are supplied with safety end caps to highlight the risk and protect against injury. These caps **MUST** be removed as work progresses and not built into the bed joint

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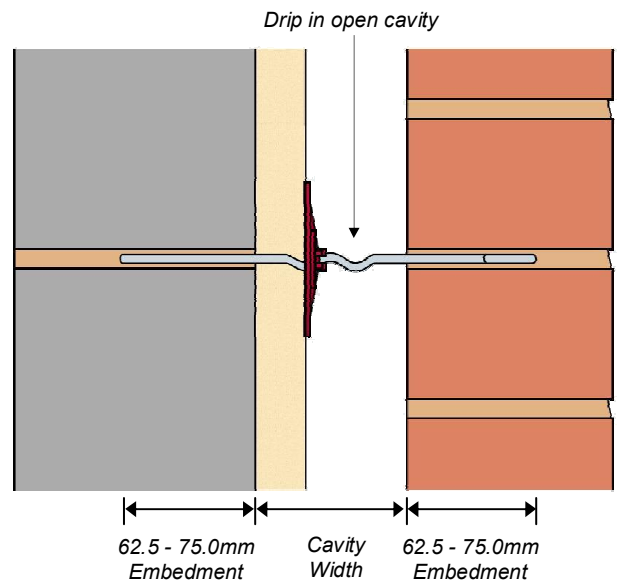
## CAVITY WALL TIES

### Length of Tie & Embedment

Wall ties should be of the correct length to ensure they are properly embedded in the masonry. The tie should have a minimum embedment of 50mm in each leaf but the length should also take site tolerances into account for both cavity width and centring of the tie. For this reason Ancon recommends tie lengths which achieve an embedment of between 62.5mm and 75mm.

### Recommended Wall Tie Lengths

Cavity Width (mm)	Tie Length (mm)
50-75	200
76-100	225
101-125	250
126-150	275
151-175	300
176-200	325
201-225	350
226-250	375
251-275	400
276-300	425



### Installation Guidance

Wall ties are important to the stability of masonry and failure to install them correctly may lead to damp penetration, cracking or even the collapse of walls.

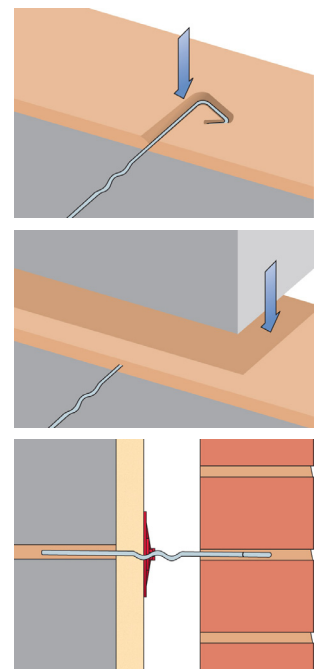
Wall ties should be pressed down in fresh mortar. They should be surrounded by mortar and not simply positioned directly onto masonry with mortar placed around them.

Ideally, ties should be installed with a slight fall to the outer leaf, not towards the inner leaf as this could provide a path for moisture to cross the cavity.

The drip part of the tie should point downward and be positioned near the centre of the open cavity. Ties with multiple drips, like the Staifix RT2, can often be positioned centrally as part of the drip will normally be near the centre of the open section of a partial fill cavity. 'O rings' as used on the TeploTie should be moved along the shank to the open cavity. Installed ties should be clear of mortar droppings to allow the drip to function and prevent water from crossing to the inner leaf of masonry.

The practice of bending up installed wire ties should be discouraged. This can adversely affect the performance of the tie and weaken the embedment in the inner leaf. Rigid ties should never be bent on site.

To ensure cavity wall ties are effective at tying the leaves together they should be installed as the inner leaf is constructed and not simply pushed into a joint.



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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. Ancon Building Products cannot be held responsible for any injury as a result of using our products, unless such injury arises as a result of our negligence.